



MINUTES

SELECT BOARD

02/16/2021

Present: Select Board Member Bernard W. Greene, Select Board Member Nancy S. Heller, Select Board member Heather Hamilton, Select Board Member Raul Fernandez, Select Board Member John VanScoyoc

6:00pm - remote participation meeting via the zoom virtual meeting platform. A recorded meeting.

ANNOUNCEMENTS/UPDATES

CONGRESSIONAL REPRESENTATIVE INTRODUCTION AND UPDATE

Introduction and congressional update from Congressional Representative Jake Auchincloss.

Chair Greene gave a brief introduction.

Congressman Jake Auchincloss reviewed that he was a City Councilor in Newton for 5 years prior to his election. He represents districts with very different issues. He gave a brief update in the atmosphere in Washington right now which is an incredibly divided and toxic environment. The GOP is not a partner now. Portions of congress are conspiring to undermine free elections. There is not any unity with those elements and we need to focus on accountability and justice.

Transportation and Infrastructure:

We need to move past single occupancy vehicles that are the focus of our infrastructure and towards multimodal thinking from everything from cycling, walking and scooters towards buses and fixing the rail system. He serves on the Transportation Infrastructure committee. We got the American rescue plan and then next up is and should be an infrastructure package. And then also investing in transit and recognizing that that's not just an infrastructure imperative. It's a climate change imperative.

Transportation accounts for something like 40% of the carbon emissions in Massachusetts, for example, and so far as we are just inducing, more vehicle miles to be traveled. We are going backwards on our carbon neutrality goals. We've got to be investing things like South Coast Rail, bus rapid transit and better infrastructure for cycling and walking.

COVID 19:

The Biden Administration is presenting a \$1.9 trillion rescue plan that will provide huge sums of money to families, small businesses, state and local communities and to fund vaccine supplies and PPE materials. The road to win the race is to vaccinate. On the Covid vaccine and when the groups will start expanding Rep Auchincloss reviewed that is the question of the day. First we need the supply and then the distribution. He just signed onto a letter from the Mass delegation employing Governor Baker to set up a one stop shop vaccination process. We should be able to do this on a website right now; I do feel

5.A.

In Select Board

02/16/2021

Page 2 of 13

this is improving. We need to compliment a mass vaccination approach with local clinic town by town. What is the president thinking about in terms of supplying the vaccine worldwide?

Right now there is just enough vaccine to procure the United States. At this point it looks like Africa will not be able to get the vaccine until 2024. That a humanitarian catastrophe and the problem is the virus will keep mutating.

14th Amendment:

The 14th Amendment is obviously to sit with one of the Civil War amendments. That was critical for codifying equality in our country, but it specifically says in section three, if you swear an oath to the Constitution; you cannot that incite an insurrection against the US government. It as a way to keep former Confederate officers out of Congress, ironically enough, and what Donald Trump did is really self-evidently a violation of the 14th Amendment, and it wasn't a matter of has it been used in the past to prevent federal officials from holding office in the future if they were in violation of it, but what I have called for is that we pass as a resolution of Congress, a statement that Donald Trump incited an insurrection, and thereby violated the 14th Amendment and then under the auspices of section three. He therefore has been prohibited from being voting into office again in the future. That will get challenged in the courts. There's no doubt about it. It's going to be up to the Supreme Court to rule on it.

Education:

We first campaigned on expanding pre-K, in Newton; we need to do it. Childcare is infrastructure. I am in strong support. Schools are not open now. Brookline schools are not open now, and I applaud you to continue to grind away. Surveillance testing is an issue to provide public health and a tool to give people confidence and feel safe to get back to full time, in-person schooling. We need the kids back full time no later than September across the state.

Housing policy, disinvestment in public housing inability to fund new units:

There is a lot there and this is a major issue in Brookline and in Newton. The Green New Deal, I support it. We basically take a jobs program to help retrofit housing stock throughout the country and apply it to our carbon neutrality goals. I think that's good in a number of fronts. It's an important jobs program that you can upscale a huge part of the workforce with and it saves both homeowners themselves in terms of energy dollars, but also promotes sustainability. So I am a strong supporter of that. I think there are fixes to Section 8 in general in terms of making it easier to go into their homeownership program where you earn equity in the unit that you're in. I do want to point out, though, that I don't think that housing in this country is mostly or even primarily a federal funding issue. There is actually a ton of private capital that wants to work to build housing in this country, but we make it very hard. We make it really hard to build housing in this country, there is a layer of federal, state, local, permitting challenges and our transportation infrastructure doesn't always support it.

Capitol Hill Safety issues after the January 6, 2021 insurrection:

I am concerned that our reaction to it is by militarizing the capita, and that is the wrong action to take. Right now we've got this fencing with barbed wire over it. It's being patrolled by guards with automatic weapons. The whole place feels like a green zone, and that's not the posture that we want the US Capitol to have. We want the US Capitol to have journalist's constituents' taxpayer's advocates, to feel safe coming into that building so they can come see their representatives. It is meant to be permeable to the public, and I don't want us to lock it down and make it feel hostile to people. I don't think that's fair.

5.A.

In Select Board

02/16/2021

Page 3 of 13

I do want to take this moment to introduce my district director Dana Hanson. Ms. Hanson introduced herself and provided her contact information.

PUBLIC COMMENT

1. Neil Gordon: TMM#1 spoke on statements the Diversity, Inclusion and Community Relations Commission took last week at the meeting. He feels those statements that are critical of select board members and condemning them as racist, the President of the police union, a long serving female police sergeant or acting police chief and our moderator Gadsby were drafted hastily with exaggerations and fact less conclusions. He also spoke on the language on their agenda feeling it was too vague.
2. Deborah Brown: spoke on last week's audit report review and she wished the Board took the time to offer more questions and delayed the voted so the information could be thoroughly adsorbed. She also expressed concerns that the budget will address the need for safe affordable housing. Wi-Fi access at the Brookline Housing Authority continues to be absent from the budget.
3. Jonathan Klein: TMM#10 and member of the Housing Advisory Board spoke in support of the Housing Production Plan that will be presented as draft A later tonight. It is important to stay focused of a Housing Production plan as the goal.
4. Chair Greene updated the Board on recent efforts by the Veterans Director Bill McGroarty where he encountered a WWII veteran during a welfare check. Alan Seroll served in the Pacific and is 105 years old, living in precinct 13. We salute Mr. Sorel and thank you for your service.
5. Board member Fernandez spoke on the passing of Doris Bunte, the first black woman elected to be a state representative and the first black woman to run the Boston Housing Authority. She was an advocate, community activist and public servant. Ms. Bunte was 87 years old and lived in Brookline in her later years.
6. Board member VanScoyoc spoke on the turbulent times during the integration of Boston's Public Housing and Doris stepped into that. He wished Elinor Kaplan a happy 100th birthday. He gave a brief review of her and her late husband Sumner's achievements within state and local government. He then presented a slide from Metco students expressing their feelings surrounding the pandemic, remote learning and racial civil unrest. Their words are saddening and families are really struggling with remote leaning.

MISCELLANEOUS

Question of approving the meeting minutes from February 9, 2021.

On motion it was,

Voted to approve the minutes of February 9, 2021 as amended.

Aye: Bernard Greene, Nancy Heller, Heather Hamilton, Raul Fernandez. John VanScoyoc

GRANT

Question of accepting a State Fiscal Year 2021 Community Transit Grant Program award for the Digital Mobility Mentorship program in the Department of the Council on Aging in the amount of \$66,400.

5.A.

In Select Board

02/16/2021

Page 4 of 13

On motion it was,

Voted to accept a State Fiscal Year 2021 Community Transit Grant Program award for the Digital Mobility Mentorship program in the Department of the Council on Aging in the amount of \$66,400.

Aye: Bernard Greene, Nancy Heller, Heather Hamilton, Raul Fernandez. John VanScoyoc

AMENDMENTS

Question of approving the following amendments for the Cypress Playground Construction Services:

1. Award and execute the Construction Administration contract to Weston and Sampson Engineers, Inc, to assist the Town in construction oversight of Contract PW/20-15, for the Cypress Street Playground project, in the total amount of \$96,000.00
2. Award and execute Contract No. PW/20-15 "Cypress Street Playground" with Heimlich Landscape and Construction Corp., 65R Burlington Street, Woburn, MA, 01801, in the amount of \$5,263,523.00

On motion it was,

Voted to approve the following amendments for the Cypress Playground Construction Services:

1. Award and execute the Construction Administration contract to Weston and Sampson Engineers, Inc, to assist the Town in construction oversight of Contract PW/20-15, for the Cypress Street Playground project, in the total amount of \$96,000.00
2. Award and execute Contract No. PW/20-15 "Cypress Street Playground" with Heimlich Landscape and Construction Corp., 65R Burlington Street, Woburn, MA, 01801, in the amount of \$5,263,523.00

Aye: Bernard Greene, Nancy Heller, Heather Hamilton, Raul Fernandez. John VanScoyoc

AMENDMENT

Question of approving Amendment #1 to contract PW/19-15 with Stantec Consulting Services, Inc., in the amount of \$14,800, for construction phase services specific to lighting and electrical engineering on the Carlton Street Footbridge Rehabilitation project.

On motion it was,

Voted to approve Amendment #1 to contract PW/19-15 with Stantec Consulting Services, Inc., in the amount of \$14,800, for construction phase services specific to lighting and electrical engineering on the Carlton Street Footbridge Rehabilitation project.

Aye: Bernard Greene, Nancy Heller, Heather Hamilton, Raul Fernandez. John VanScoyoc

CONTRACT

Question of approving construction phase services contract PW/21-11 with Kleinfelder Engineering, in the amount of \$191,301, for structural and civil engineering required of the Carlton Street Footbridge Rehabilitation project.

5.A.

In Select Board

02/16/2021

Page 5 of 13

On motion it was,

Voted to approve construction phase services contract PW/21-11 with Kleinfelder Engineering, in the amount of \$191,301, for structural and civil engineering required of the Carlton Street Footbridge Rehabilitation project.

Aye: Bernard Greene, Nancy Heller, Heather Hamilton, Raul Fernandez. John VanScoyoc

ALTERNATE MANAGER

Question of approving the application of Alternate Manager, Xuan Jiang, for PCTERRACE LLC d/b/a Noah's Kitchen at 18 Harvard Street.

On motion it was,

Voted approve the application of Alternate Manager, Xuan Jiang, for PCTERRACE LLC d/b/a Noah's Kitchen at 18 Harvard Street.

Aye: Bernard Greene, Nancy Heller, Heather Hamilton, Raul Fernandez. John VanScoyoc

CHANGE IN D/B/A

Question of approving the application for a change in D/B/A from Rue De Saveur, LLC. d/b/a Rue De Saveur to Rue De Saveur, LLC. d/b/a vomFass at 305 Harvard Street.

On motion it was,

Voted to approve the application for a change in D/B/A from Rue De Saveur, LLC. d/b/a Rue De Saveur to Rue De Saveur, LLC. d/b/a vomFass at 305 Harvard Street.

Aye: Bernard Greene, Nancy Heller, Heather Hamilton, Raul Fernandez. John VanScoyoc

AUTHORIZATION TO HIRE

Question of approving the authorization to hire request for the following positions in the Department of the Council on Aging:

Van Driver

Program Manager (T-5)

Home Care Coordinator (T-3)

Group Leader (GN-2)

On motion it was,

Voted to approve the authorization to hire request for the following positions in the Department of the Council on Aging:

Van Driver

Program Manager (T-5)

Home Care Coordinator (T-3)

Group Leader (GN-2)

5.A.

In Select Board

02/16/2021

Page 6 of 13

Aye: Bernard Greene, Nancy Heller, Heather Hamilton, Raul Fernandez. John VanScoyoc

CALENDAR

COVID-19 UPDATE

Update on the status of COVID-19 in Brookline.

Dr. Jett, Director of Health and Human Services gave a brief update as of Feb. 15 (increase since Feb. 12 update in parentheses):

Total Positive Cases: 1,831 (14)

Deaths: 94 (0)

Total Probable Cases: 180 (5)

Total Quarantined (not sick): 1,420 (5)

Suspected Cases: 71 (0)

Released from Quarantine: 713 (6)

Released from Isolation: 1105 (9)

- We are in the middle of an outbreak of the virus in several daycares with the average age being 5 years old. There have been 48 cases.
- Contact tracing efforts are helping
- Vaccine distribution has been predetermined.
- Implemented conservative restrictions to address those that travel
- Noticing people have lingering covid fatigue and many are not calling back after quarantine to update on their conditions. How can we stop citizens from doing what they want to do?
- Research possible mobile vaccine clinics once it is available
- Seniors beware of accepting rides from a stranger to vaccine sites. Please try to get a ride from someone you know

LODGING HOUSE - CHANGE IN LODGING HOUSE AGENT

Question of approving the application for Lodging House Agent Jephthe Jeanniton for Longwood Guest House at 83 Longwood Ave.

Applicant Jephthe Jeanniton was present. Board member Heller noted that the neighbors would like to have access to the agent's contact information easily. Town Administrator Kleckner responded that they are in the middle of an audit of the lodging houses and the intent to have the information on the Town's website.

On motion it was,

Voted to of approve the application for Lodging House Agent Jephthe Jeanniton for Longwood Guest House at 83 Longwood Ave.

Aye: Bernard Greene, Nancy Heller, Heather Hamilton, Raul Fernandez. John VanScoyoc

5.A.

In Select Board

02/16/2021

Page 7 of 13

CHANGE IN MANAGER - THE INN AT BROOKLINE

Question of approving the application of a Change of Manager from Anthony Adianto to Mohamed Hashesh for CCLLH, LLC d/b/a Holiday Inn Boston Brookline at 1200 Beacon Street.

Attorney Steffani Boudreau gave a brief review of the application and Mr. Hashesh's qualifications.

Mr. Hashesh introduced himself and reviewed that their policy is to ask for identification of everyone ordering an alcoholic beverage. He is familiar with Brookline's liquor policy.

On motion it was,

Voted to approve the application of a Change of Manager from Anthony Adianto to Mohamed Hashesh for CCLLH, LLC d/b/a Holiday Inn Boston Brookline at 1200 Beacon Street.

Aye: Bernard Greene, Nancy Heller, Heather Hamilton, Raul Fernandez. John VanScoyoc

COMMON VICTUALLER - CHANGE IN D/B/A & HOURS

Question of approving the application for a change in D/B/A from SLH Restaurant LLC. d/b/a The Brothers Restaurant to SLH Restaurant LLC. d/b/a Vello Restaurant Bar at 404 Harvard Street.

Question of approving the application for a change in Common Victualler hours for SLH Restaurant LLC. d/b/a Brothers Restaurant at 404 Harvard Street.

From: Monday to Thursday 11:00AM – 10:00PM, Friday 11:00AM – 11:00PM, Saturday 7:00AM – 11:00PM and Sunday 7:00AM – 10:00PM

To: Saturday – Sunday 7:00AM – 12:00AM

Attorney Frank Ravinal reviewed that after some consideration and to be more in line with the Latin flavor of the restaurant the owners felt that a name change was appropriate.

The board discussed the midnight closing request. It was noted that if any problems arise from the neighbors the hours can be adjusted. There have not been any complaints from this establishment in the past.

On motion it was,

1. Voted to approve the application for a change in D/B/A from SLH Restaurant LLC. d/b/a The Brothers Restaurant to SLH Restaurant LLC. d/b/a Vello Restaurant Bar at 404 Harvard Street.
2. Voted to approve the application for a change in Common Victualler hours for SLH Restaurant LLC. d/b/a Brothers Restaurant at 404 Harvard Street.

From: Monday to Thursday 11:00AM – 10:00PM, Friday 11:00AM – 11:00PM, Saturday 7:00AM – 11:00PM and Sunday 7:00AM – 10:00PM

To: Saturday – Sunday 7:00AM – 12:00AM

5.A.

In Select Board

02/16/2021

Page 8 of 13

Aye: Bernard Greene, Nancy Heller, Heather Hamilton, Raul Fernandez. John VanScoyoc

COMMON VICTUALLER/ENTERTAINMENT LICENSE

Question of approving the application of a new Common Victualler for SYS, LLC d/b/a Dolma Mediterranean Cuisine at 5 Kendall Street. Hours of operation will be Monday –Sunday 7:00 am to 12:00 am. Seating will consist of 16 seats.

Question of approving the application of a new Entertainment for SYS, LLC d/b/a Dolma Mediterranean Cuisine at 5 Kendall Street. Entertainment will consist of radio and recorded music Monday –Sunday 7:00 am to 12:00 am.

Applicant Selim Gurel was present.

Chair Greene noted that some neighbors have expressed some concern on the midnight closing hour.

Amie Lindenboim said she is excited for this establishment to open but does have some concerns with the late closing hour due to the proximity to neighbors. She hopes they could scale back the hours at first to see how it goes.

Neil Wishinsky, TMM#5 welcomed the business, but also noted the later closing hour. He reviewed neighboring restaurants that close prior to 10:00 pm.

Mr. Gurel responded that he has no problem being align with the other businesses. He will close at 10:00 pm in the beginning, and if things go well, he may request a later closing time.

On motion it was,

1. Voted to approve the application of a new Common Victualler for SYS, LLC d/b/a Dolma Mediterranean Cuisine at 5 Kendall Street. Hours of operation will be Monday –Sunday 7:00 am to 10:00 pm. Seating will consist of 16 seats.
2. Voted to approve the application of a new Entertainment for SYS, LLC d/b/a Dolma Mediterranean Cuisine at 5 Kendall Street. Entertainment will consist of radio and recorded music Monday –Sunday 7:00 am to 10:00 pm.

Aye: Bernard Greene, Nancy Heller, Heather Hamilton, Raul Fernandez. John VanScoyoc

FY2022 FINANCIAL PLAN

Town Administrator Melvin Kleckner and Deputy Town Administrator Melissa Goff presented the FY2022 Financial Plan.

Highlights:

- The FY22 Financial Plan represents the second year of using a new integrated budget tool called OpenGov
- FY 2022 Budget represents a “Recovery Budget” Gradual recovery of revenue loss

5.A.

In Select Board

02/16/2021

Page 9 of 13

- Capital Budget represents 7.9% of prior year net revenue
- New Debt Exclusions
- Enterprises are up by 5.3%
- Reserves and long-term liability funding meet goals
- Goal of 10% in unreserved fund balance
- Full pension funding
- Deferral of increased OPEB contributions
- No federal stimulus for operating budget
- Establish Racial Equity Advancement Fund with \$500,000 endowment from HCA funding

REVENUES (State Aid)

State Aid: \$22.8 million, up 1.8%

- UGGA increases \$236K (3.5%) and reflects the Governor's commitment to tie Local Aid to consensus revenue projection
- Chapter 70 increases \$206K (1.4%)
- Brookline is now a minimum aid (17.5%) community
- Further evaluation of budget as legislature presents State Aid

Review of revenues (Local Receipts)

- Local Receipts: \$23.9 million, down \$412K, 1.7%

Review of Free Cash

- Free Cash: \$10.4 million
- Total certified Free Cash is \$13,001,890. Remaining balance is left unappropriated to support our Unreserved Fund Balance
- Additional support for CIP (\$457K)
- Stabilization Fund (\$2.89M)
- Affordable Housing Trust Fund (\$81K)
- HCA surplus (\$862K)
- Free Cash limited to one-time funds

Review of Expenditures (Schools)

Review of Expenditures (Municipal departments)

Review of FY2022 Policy Issues & Initiatives

Review of Capital Improvement program

Review of long-range financial plan

- Police reimagining reform committee is doing a thorough job and will come forward with recommendations
- Sustainability and climate action; we are actively seeking a Sustainability Director.
- Human and social services, we need to determine long-term funding because historically some of these services were not locally funded.

Q&A

Vice Chair Hamilton noted that the School Committee voted for something other than what we have provided funding for them; it is \$4 million above what we have budgeted for the schools.

Town Administrator Kleckner replied that not override is assumed in the budget, those funds would have to come from somewhere; he has not assumed any of those funds and stands by his allocation. It is up to Town Meeting to consider the funding. He has assumed no general wage increases on the municipal side of the budget.

5.A.

In Select Board

02/16/2021

Page 10 of 13

Board member Fernandez asked about the meter fees and if there is any plans to revisit an increase there. He would also like to see how we are prioritizing equity into the CIP.

Melissa Goff, Deputy Town Administrator replied that meter fee increases are not built into the budget estimates. It is difficult to determine what that means in a low economic activity environment. CIP projects move along after consulting with the department head before making any adjustments because they know what the process has been and what the priorities are and the urgent needs in the system.

Board member Heller asked about Debt Service

Ms. Goff responded that \$21 million is the debt exclusion number that was what was shown in the levy picture; this is because some school projects are kicking in now and the Newbury site. I believe it went from \$13 million in FY21 to \$21 million in FY22.

Board member VanScoyoc asked about the FTE (full time employees) increases and decreases in the budget. Is it possible to go department by department to see what they are getting; what's the increase or decrease in the departmental budgets. Also who is tracking the school department's FTE's as they compare to enrollment numbers, because it seems glaring that we had an enrollment dip of nearly 1000 students last year and now we're hearing that we're going to need an additional five to six million over and above what we spent last year.

Town Administrator Kleckner responded that they identify a bottom line budget which Town Meeting approves, yes it is true we need to understand the school's budget, I am sure the Advisory Committee will be diving deep into that.

Ms. Goff added that section 2 in the interactive budget has those numbers you are looking for.

Board member Fernandez asked how they would like to receive feedback from boards and commissions.

Mr. Kleckner responded that hearing and listening sessions are a good tool, plus we will hear from every department during the budget process. As well as the Advisory Committee's budget process.

The Board noted that this presentation was just received and they will take the time to dig in and fully review the budget.

HOUSING PRODUCTION PLAN

Continued discussion and possible vote on the scope of work of the Housing Production Plan.

Joe Viola, Assistant Director of Planning and Community Development reviewed the submitted memo to the board:

As you recall, the Planning Department and Chair of the Housing Advisory Board were before you on January 26th to present a draft Request for Proposals (RFP) to engage a consultant to develop a Housing Production Plan (HPP), the purpose of which is two-fold: 1.) meet the requirements of the Department of Housing and Community Development in order to secure certification of the plan if and when the Town is eligible for a temporary safe harbor from c. 40B and 2.) provide a strategic five-year plan to produce market and affordable housing. Broad public participation is integral to the plan preparation.

5.A.

In Select Board

02/16/2021

Page 11 of 13

The Select Board was generally supportive of the draft, but two members requested some modifications relative to impact analysis and disadvantaged businesses. The Planning Department, with input from Town Counsel's Office, has attempted to respond to the request for modifications, and have proposed changes, identified with "track changes" in the attachment labeled "Draft A." Similarly, Select Board Member Heller has submitted changes relative to impact analysis, as requested by the Chair; her proposed changes are set forth in "track changes" in the attached version, labeled "Draft B." We are providing the two drafts in order to frame the Board's discussion. The Planning Department is respectfully requesting direction from the Board so that we may insure that the final RFP reflects the Select Board's position on the Scope of Work.

Select Board member Heller reviewed that the concern is the Planning department started this process months ago, before Article 34 passed at town Meeting. Article 34 asks that the Town does a comprehensive plan about housing in general and impact review before embarking on a program. What concerned her is the draft talked about market rate housing and in the past we always focused on affordable housing, we should be doing that. I don't want the HPP to be contradictory to article 34 that was passed by Town Meeting. The HPP cannot supersede article 34; we can't undercut that.

Planning Director, Alison Steinfeld, added that the difference between version A and version B is version A is really a housing production plan that is focused on how to produce housing and it is consistent with the state guidelines; it has a twofold approach. One is to provide the opportunity, if approved by the state to offer us a potential safe harbor right from 10% if we qualify, and secondly is to tell the town, how to produce housing and from our perspective version B can ultimately be a housing production plan, but first and foremost seeks to address the question, does the town want more housing and if so let's identify the impacts first and then consider production. To me that those are the two fundamental distinctions and we need to know how the board wants us to proceed. I think version B does require more analysis than perhaps the planning department and the HAB had expected to do.

Jennifer Raitt, Housing Advisory Board (HAB) member added that this is really meant to be a proactive strategy for planning and developing housing that is the core of what a housing production plan is about it. It seems rather obvious because it's called a housing production plan, but it's doing everything that the Planning staff has put together in this draft RFP, which is to really assess the needs and demand by looking at the existing and projected demand. She also noted that a regional plan production will be coming out soon and that information will be helpful in the planning.

Linda Pehlke, TMM#2 noted that the discussions around article 34 was that people did not feel comfortable setting a policy for the town to significantly increase the amount of housing until they understood all the impacts, physical, revenue, lifestyle, businesses, the whole nine yards. This is not going to become a comprehensive plan simply by the fact that it's only about housing. She added if we don't do the direction of Article 34 now we will have to do it later.

Housing Advisory Chair, Roger Blood added that the petitioners of Article 34 started out all about housing and productions before all the amendments were added. There is a lot in the existing RFP about impact and community engagement is going to open up a very open ended with extensive input from all stakeholders in the community about impact to the community. The HAB supports version A. we are talking about housing planning versus comprehensive planning, and the added language will add the time to complete this study and likewise the cost.

Board member VanScoyoc added that this might be an object lesson on what can go wrong when people

5.A.

In Select Board

02/16/2021

Page 12 of 13

try to go through Town Meeting when it should have been left to the planning department to figure out. Someone had the idea that they would not be happy with the outcome so drafted an article to dictate what it should be; now we are.

Michael Zoorob, submitted that Article 34 explicitly mentioned subsidize low income housing and workforce housing developed through various means including developer incentives and inclusionary zoning and market rate housing. How can you remove these great housing options, and be consistent with Article 34.

Ms. Steinfeld added that you can't do a true HPP and incorporate all of Article 34 into it.

On motion it was,

Voted to approve option A - Request for Proposals Housing Production Plan Consultant as submitted by the Planning Department.

Aye: Bernard Greene, Heather Hamilton, Raul Fernandez. John VanScoyoc

Against: Nancy Heller

BOARDS AND COMMISSIONS - APPOINTMENTS

The following candidates for appointment/reappointment to Boards and Commissions:

Small Business Development Committee

Committee on Policing Reforms Small business

Small Business Development Committee

There are currently six vacancies on this committee.

On motion it was,

Voted to appoint the following members to the Small Business Development Committee:

1. Tracy Chen
2. David Gladstone
3. Jenn Mason
4. Leyroy Watkins
5. Andrew Weiner
6. Colleen Suhanosky

Committee on Policing Reforms

The Board discussed whether the applicant should be interviewed or not. Board member Fernandez felt that if this committee is to be ongoing any applicants should go through the interview process. Chair Greene indicated that he feels the committee will last only a few weeks longer, and at the start these members were appointed by the Chairs and no interview process was done. The Board did approve the candidate list. The board may look at how they proceed should this committee continue further than anticipated.

5.A.

In Select Board

02/16/2021

Page 13 of 13

On motion it was,

Voted to appoint Sassan Zelkha to the Committee on Policing Reforms

There being no further business, the Chair ended the meeting at 10:00 pm.

ATTEST

5.B.



TOWN of BROOKLINE
Massachusetts
BUILDING DEPARTMENT

Daniel F. Bennett
Building Commissioner

To: Select Board

From: Anthony Guigli, Project Manager

Date: 16 February 2021

Re: Michael Driscoll School
Gilbane Building Company
Contract Amendment #3 - \$140,000

The proposed amendment #3 to the contract between the Town of Brookline and Gilbane Building Company for the Michael Driscoll School in the amount of \$140,000.00 is for added preconstruction services. Attached is a letter of recommendation from Leftfield LLC with additional information.

The Building Commission approved it at their meeting last week and the School Committee is expected to take similar action at a meeting in the near future.

Please call or email with questions.

Thank you for the consideration of the above.

Cc: D. Bennett

5.C.



TOWN of BROOKLINE
Massachusetts

BUILDING DEPARTMENT

Daniel Bennett
Building Commissioner

TO: Selectboard/ School Committee

FROM: Ray Masak, PE Project Manager

SUBJECT: High School Expansion Project – Construction Management @ Risk (CM@R)
Skanska Change Order –Guaranteed Maximum Price (GMP) CO No.8/PCCO No.15

DATE: February 17, 2021

On the Calendar this week, the Building Department has submitted a request for Change Order for the construction management firm Skanska to perform the following services:

- PCCO No. 15 - \$0; 33 Misc. Changes

The HS expansion project was awarded to the contractor Skanska which was based on their qualifications. This package represents a change to the project. Refer to the Hill memo dated February 5, 2021 for further explanation of the 33 items listed in this CO.

The Building Department is available to answer any questions you may have. Thank you for your consideration.



Hill International

Hill International, Inc.
75 Second Avenue, Suite 300
Needham, MA 02494
Tel: 617-778-0900
Fax: 617-778-0999
www.hillintl.com

February 5, 2021

Mr. Ray Masak, P.E.
Project Manager
Town of Brookline Building Department
333 Washington Street
Brookline, MA 02445

RE: Recommendation to approve Skanska Change Order 008/PCCO 015

Dear Mr. Masak:

Under separate cover, Skanska USA Building Inc. is submitting original copies of Change Order 008/PCCO 015 for the Expansion of Brookline High School Project for acceptance by the Town of Brookline (ToB). It includes (33) separate Authorization Requests (AR's). Hill and WRA have previously reviewed, negotiated where applicable, and agree that all items listed in this Change Order are fair, reasonable for the described scope of work, and are compensable adjustments to the GMP. All of the changes this month are being funded from various contingencies, allowance or exposure hold line items within the GMP. The result are budget transfers within the GMP and therefore are a total **\$0 increase**.

An itemized summary is following:

AR #	CE #	Description	Current Amount	Reason Code
200.101	200.1109	Cypress - Regulated Soil Disposal / Reuse on site / material QTY overruns	\$0.00	GMP Allowance reconciliation
200.118	200.1154	CYPRESS - Field Bulletin 092 - Stair 3 Exterior Wall Revisions for Code (<i>Design issue</i>)	\$0.00	GMP Contingency
200.129	200.1197	Cypress - Increase Post Size on North Stair SS Rails RFI 235 (<i>Design issue</i>)	\$0.00	GMP Contingency
200.130	200.1231	CYPRESS - MBTA ROW Safety Measures	\$0.00	GMP Allowance
200.135	200.1249	Cypress - Provide Silver Metallic Paint at Fire Rated Framing (<i>Design issue</i>)	\$0.00	GMP Contingency
200.137	200.1243	CYPRESS - Field Bulletin 121.1 - Roof Guy Wires (<i>Design issue</i>)	\$0.00	GMP Contingency
200.138	200.1241	CYPRESS - Field Bulletin 074.1 - Rated Wall and Ductwork Coordination (<i>Design issue</i>)	\$0.00	GMP Contingency
200.139	200.1254	CYPRESS - Field Bulletin 122 - LCN Closer Revision (<i>Design issue</i>)	\$0.00	GMP Contingency

5.C.

200.140	200.1257	Cypress - Field Bulletin 130 - Metal Ceiling Fabric (<i>Design issue</i>)	\$0.00	No cost change
200.141	200.1191	CYPRESS - Field Bulletin 109 - White Box Acoustic Soffit – (<i>Design Savings</i>)	\$0.00	GMP Contingency
200.142	200.1195	CYPRESS - Field Bulletin 111 - Special Education Suite Door Glazing (<i>Owner change</i>)	\$0.00	GMP Contingency
200.146	200.1269	Cypress - RFI 284 - Sump Pump Requirements (<i>Design issue</i>)	\$0.00	GMP Contingency
200.147	200.1267	CYPRESS - Field Bulletin 137 - CBT Revision PT Update (<i>Design Savings</i>)	\$0.00	GMP Contingency
200.149	200.1229	Cypress - Electrical Switch Reset (<i>CM request</i>)	\$0.00	GMP Contingency
200.150	200.1275	Cypress - EH Upgrade to paperless drywall (<i>CM request</i>)	\$0.00	GMP Exposure Hold
200.151	200.1190	CYPRESS - Field Bulletin 107 - Stair Tile Deletions - WH Reception Desk Removal (<i>Design Savings</i>)	\$0.00	GMP Contingency
200.158	200.1248	Cypress - EH Place Barriers at electrical switch/transformer (<i>CM request</i>)	\$0.00	GMP Exposure Hold
300.088	300.1116	STEM - FB 090 & 090R1: Mechanical Screen Wall (<i>Design issue</i>)	\$0.00	GMP Contingency
300.106	300.1156	STEM - Pull Station Stopper Covers (<i>Unforeseen</i>)	\$0.00	GMP Contingency
300.128	300.1159	STEM - FB 0117: Stair 5 Structural Modifications (<i>Design fast track</i>)	\$0.00	GMP Contingency
300.138	300.1171	STEM - Exposure Hold Expenditure - Patching or Protection of Waterproofing	\$0.00	GMP Exposure Hold
300.139	300.1209	STEM - OA Expenditure Existing FA Upgrade Support Work	\$0.00	GMP Allowance
300.140	300.1210	STEM - EH Expenditure: Temporary Lighting at Elevator Pit	\$0.00	GMP Exposure Hold
300.141	300.1211	STEM - Expenditure hold: Drywall Upgrades at West Demising Wall	\$0.00	GMP Exposure Hold
300.142	300.1212	STEM EH Expenditure Furnish and Install Utility Crawl Space Protection	\$0.00	GMP Exposure Hold
300.143	300.1163	STEM - FB 0111: Site Concrete and Rebar	\$0.00	GMP Contingency
300.144	300.1207	STEM - JK Glass Sunday 1/10/21	\$0.00	GMP Exposure Hold
300.145	300.1225	STEM - RFI 428: CW Conflict with Curbs at North Elevation (<i>Design issue</i>)	\$0.00	GMP Contingency
300.146	300.1216	STEM - EH Expenditure: Existing Cornice/CW Conflict	\$0.00	GMP Exposure Hold
300.147	300.1221	STEM JK Glass Saturday 1/23/21 Work	\$0.00	GMP Exposure Hold
300.148	300.1195	STEM - Folan Waterproofing Saturday 12/12 Work	\$0.00	GMP Exposure Hold

5.C.

400.047	400.1060	MBTA & Enabling - FB 017 Signage Revisions (<i>Design issue</i>)	\$0.00	GMP Contingency
400.048	400.1088	MBTA- OCS & Enabling - Provide Coax Cable to AFC Hut Security Camera (<i>Design issue</i>)	\$0.00	GMP Contingency

Based on the above, Hill recommends to ToB approval of Change Order 008/PCCO #15 to the GMP.

Very truly yours,



Andy Felix, MCPPO
Project Director

pursuant to MA DOR borrowing authorization,
ToB proceeding with releasing Contracts/POs:

<u>Item</u>	<u>Company</u>	<u>Contract/PO Amount</u>
Deferred Maintenance	N.B. Kenney Co. Inc.	\$3,075,000
3 rd Floor & Tappan Gym Reno	CTA Construction Managers, LLC	\$7,821,340 (includes Bid Alt #1)
Cypress Playground	Heimlich Landscape/Const	\$5,263,523
Cypress Playground - CA	Weston & Sampson – Construction Admin. Services	\$96,000
Furniture, Fixtures and Equipment	various vendors (W.B. Mason, direct science equipment purchases by Science Dept., etc.)	\$3,100,000 (not-to- exceed budget)
Security	Lan-Tel	\$181,167.97
Technology	various ToB procured vendors	\$1,500,000 (not-to- exceed budget)
A/E	WRA Amendment #20 – Schedule extension beyond original schedule in Amendment #1	\$588,751
OPM	Hill Amendment #6 – extend Site Representative Services thru July, 2021	\$161,910
OPM	Hill (future) Amendments: reconcile MBTA-related tasks; managing (2) additional contractors; services extension (if required); some projected costs were already included within Warrant Article.	TBD and negotiated w/ToB
A/E	WRA (future) Amendments: managing (2) additional contractors; some projected costs were already included within Warrant Article.	TBD and negotiated w/ToB

AIA® Document G701™ - 2017

Change Order

PROJECT: (Name and address) Expansion of Brookline High School, (Project A and Project B)	CONTRACT INFORMATION: Contract For: Construction	CHANGE ORDER INFORMATION: Change Order Number: 008
Brookline, MA 02445	Date: July 24, 2018	Date: February 3rd, 2021
OWNER: (Name and address) Town of Brookline, Massachusetts, by and through the Board of Selectmen of Brookline 333 Washington Street, Brookline, MA 02445	ARCHITECT: (Name and address) William Rawn Associates Architects Inc. 10 Post Office Square, Suite 1010, Boston, Massachusetts 02109	CONTRACTOR: (Name and address) Skanska USA Building Inc. 101 Seaport Boulevard, Suite 200, Boston, MA 02210

THE CONTRACT IS CHANGED AS FOLLOWS:

(Insert a detailed description of the change and, if applicable, attach or reference specific exhibits. Also include agreed upon adjustments attributable to executed Construction Change Directives.)

PCCO No. 015: \$0

Neither the adjustments to the Contract Price nor the Contract Time upon which this PCCO is based contemplates any project delays, suspensions, disruptions, cost escalations or other impacts caused, directly or indirectly, by the Pandemic (as defined in the GMP), as such cost adjustment to the Contract Sum and GMP shall be reconciled in accordance with the Owner Pandemic Allowance. Skanska further reserves all rights to request adjustment of the Contract Time as a result of the Pandemic Standards and in connection with this PCCO. Skanska will make every reasonable effort to provide the required documentation and notice in accordance with this Contract, however, Skanska may not be able to meet the contractual deadlines due to circumstances outside of Skanska's control.

The original Contract Sum was	\$	476,928
The net change by previously authorized Change Orders	\$	148,602,005
The Contract Sum prior to this Change Order was	\$	149,078,933
The Contract Sum will be increased by this Change Order in the amount of	\$	0 <i>OK mm</i>
The new Contract Sum including this Change Order will be	\$	149,078,933

The Contract Time will be unchanged by Zero (0) days.
The new date of Substantial Completion will be November 15, 2021

NOTE: This Change Order does not include adjustments to the Contract Sum or Guaranteed Maximum Price, or the Contract Time, that have been authorized by Construction Change Directive until the cost and time have been agreed upon by both the Owner and Contractor, in which case a Change Order is executed to supersede the Construction Change Directive.

NOT VALID UNTIL SIGNED BY THE ARCHITECT, CONTRACTOR AND OWNER.

William Rawn Associates Architects Inc.

Skanska USA Building Inc.

Town of Brookline

ARCHITECT (Firm name)

CONTRACTOR (Firm name)

OWNER (Firm name)

SIGNATURE

SIGNATURE

SIGNATURE

Andrew Jonic AIA Sr. Associate

Robert Mulligan

PRINTED NAME AND TITLE

PRINTED NAME AND TITLE

PRINTED NAME AND TITLE

February 4, 2021

2/4/21

DATE

DATE

DATE

APPROVAL OF OWNER: TOWN OF BROOKLINE

Building Commission

Janet Fierman, Chairman

George Cole, Member

Kenneth Kaplan, Member

Karen Breslawski, Member

Nathan E. Peck, Member

School Committee

Helen Charlupski, Member

Suzanne Federspiel, Member

Jennifer Monopoli, Member

Barbara Scotto, Member

Confirmation of Availability of Funds:

Town Comptroller

Selectboard

Bernard W. Greene, Chair

Benjamin J. Franco, Member

Nancy S. Heller, Member

Heather Hamilton, Member

Raul Fernandez, Member

Julie Schreiner-Oldham, Chair

Susan Wolf Dittkoff, Member

Michael Glover, Member

David Pearlman, Member

Sharon Abramowitz, Member



Date: 2/3/2021

Prime Contract Change Order Number 015

Brookline High School

Project # 1318014

Skanska USA Building Inc.

To Contractor:

Skanska USA Building Inc.

The Contract is hereby revised by the following items:

GMP CO 008: Approved Authorization Requests

AR	CE	Description	Amount
400.047	400.1060✓	MBTA & Enabling - FB 017 Signage Revisions	\$ 0.00
200.118	200.1154✓	CYPRESS - Field Bulletin 092 - Stair 3 Exterior Wall Revisions for Code	\$ 0.00
300.088	300.1116✓	STEM - FB 090 & 090R1: Mechanical Screen Wall	\$ 0.00
200.151	200.1190✓	CYPRESS - Field Bulletin 107 - Stair Tile Deletions - WH Reception Desk Removal	\$ 0.00
200.141	200.1191✓	CYPRESS - Field Bulletin 109 - White Box Acoustic Soffit	\$ 0.00
200.142	200.1195✓	CYPRESS - Field Bulletin 111 - Special Education Suite Door Glazing	\$ 0.00
200.129	200.1197✓	CYPRESS - Increase Post Size on North Stair SS Rails RFI 235	\$ 0.00
200.101	200.1109✓	CYPRESS - Dow - Rammed Aggregate Pier OA Reconciliation	\$ 0.00
300.106	300.1156✓	STEM - Pull Station Stopper Covers	\$ 0.00
300.128	300.1159✓	STEM - FB 0117: Stair 5 Structural Modifications	\$ 0.00
300.143	300.1163✓	STEM - FB 0111: Site Concrete and Rebar	\$ 0.00
400.048	400.1088✓	MBTA - OCS & Enabling - Provide Fiberoptic Cable in lieu of CAT 6 to AFC Hut and Communications Bungalow	\$ 0.00
300.138	300.1171✓	STEM - Exposure Hold Expenditure - Patching or Protection of Waterproofing	\$ 0.00
200.149	200.1229✓	CYPRESS - Electrical Switch Reset	\$ 0.00
200.130	200.1231✓	CYPRESS - MBTA ROW Safety Measures	\$ 0.00
200.138	200.1241✓	CYPRESS - Field Bulletin 074.1 - Rated Wall and Ductwork Coordination	\$ 0.00
200.137	200.1243✓	CYPRESS - Field Bulletin 121.1 - Roof Guy Wires	\$ 0.00
300.148	300.1195✓	STEM - Folan Waterproofing Saturday 12/12 Work	\$ 0.00
200.158	200.1248✓	CYPRESS - EH - Place Barriers at Electrical Switch	\$ 0.00
200.135	200.1249✓	CYPRESS - Silver Metallic Paint at Fire Rated Framing	\$ 0.00
200.139	200.1254✓	CYPRESS - Field Bulletin 122 - LCN Closer Revision	\$ 0.00
200.140	200.1257✓	CYPRESS - Field Bulletin 130 - Metal Ceiling Fabric	\$ 0.00
300.144	300.1207✓	STEM - JK Glass Sunday 1/10/21 Work	\$ 0.00
200.147	200.1267✓	CYPRESS - Field Bulletin 137 - CBT Revision PT Update	\$ 0.00
300.139	300.1209✓	STEM - OA Expenditure: Existing FA Upgrades Support Work	\$ 0.00
300.140	300.1210✓	STEM - EH Expenditure: Temporary Lighting at Elevator Pit & Walkway	\$ 0.00
300.141	300.1211✓	STEM - EH Expenditure: Drywall Upgrades at West Demising Wall	\$ 0.00
300.142	300.1212✓	STEM - EH Expenditure: Furnish and Install Utility Crawl Space Protection	\$ 0.00
200.146	200.1269✓	CYPRESS - RFI 284 - Sump Pump Requirements	\$ 0.00
300.146	300.1216✓	STEM - EH Expenditure: Existing Cornice/CW Conflict	\$ 0.00
300.147	300.1221✓	STEM - JK Glass Saturday 1/23/21 Work	\$ 0.00
200.150	200.1275✓	CYPRESS - EH Upgrade to paperless drywall II	\$ 0.00
300.145	300.1225✓	STEM - RFI 428: CW Conflict with Curbs at North Elevation	\$ 0.00
Total			\$ 0.00

Printed on: 2/4/2021

33 items

Page 2 of 2

5.D.



TOWN of BROOKLINE

Massachusetts

BUILDING DEPARTMENT

Daniel Bennett
Building Commissioner

TO: Selectboard/ School Committee

FROM: Ray Masak, PE Project Manager

SUBJECT: Brookline High School- Amendment 6
OPM Services (FY 19)

DATE: February 17, 2021

On the Calendar this week, the Building Department is requesting the approval of an amendment for OPM services for the subject project in the amount of \$161,910.

The appropriation for this amendment was approved by Town Meeting as part of the overall CIP for FY19. The Town's onsite representative monitoring the contractor's onsite activities had to take an immediate leave of absence and his return is uncertain. The Hill amendment provides for these onsite services to continue on a temporary basis (Feb through the end of July) until the Town employee returns.

The Building Department is available to answer any questions you may have. Thank you for your consideration.



Hill International, Inc.
75 Second Ave, Suite 300
Needham, MA 02494
Tel: 617-778-0900
Fax: 617-778-0999
www.hillintl.com

February 3, 2021

Mr. Raymond Masak, P.E.
Project Manager
Town of Brookline
Brookline Town Hall
333 Washington Street
Brookline, MA 02445

Re: *Brookline High School Project*
Hill International, Inc. – Amendment No. 6

Dear Ray:

As you know, previous Amendment #5 was approved for Site Representative services thru January, 2021. As discussed prior to and during the Brookline Building Commission on January 12, 2021, we have attached the new Amendment to further extend the duration of Hill's Site Representative services from February thru the end of July, 2021.

Please do not hesitate to let me know if you have any questions.

Very Truly Yours,

A handwritten signature in dark ink, appearing to read "Andy Felix".

Andy Felix
Project Director

attachments
cc: file: A4-01

ATTACHMENT B**CONTRACT FOR PROJECT MANAGEMENT SERVICES****AMENDMENT NO. 6**

WHEREAS, the Town of Brookline ("Owner") and Hill International, Inc., (the "Owner's Project Manager") (collectively, the "Parties") entered into a Contract for Project Management Services for the Brookline High School Addition and Renovation Project at 115 Greenough Street and 111 Cypress Street, Brookline, MA (the "Contract"); and

WHEREAS, effective as of February 3, 2021, the Parties wish to amend the Contract, as amended:

NOW, THEREFORE, in consideration of the promises and the mutual covenants contained in this Amendment, and other good and valuable consideration, the receipt and legal sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, hereby agree as follows:

1. The Owner hereby authorizes the Owner's Project Manager to perform services described in The Scope of Services described in previous Amendment #5/Exhibit A, and the Workplan attached as Exhibit B, pursuant to the terms and conditions set forth in the Contract, as amended.
2. For the performance of services required under the Contract, as amended, the Owner's Project Manager shall be compensated by the Owner in accordance with the following Fee for Basic Services:

Fee for Basic Services:	Original Contract thru Amendment #4	Amendment #5	Current Contract Total
Schematic Design Phase	\$ 239,994.00		\$ 239,994.00
Design Development Phase	\$ 414,000.00		\$ 414,000.00
Construction Document Phase	\$ 460,000.00		\$ 460,000.00
Bidding Phase	\$ 209,000.00		\$ 209,000.00
Construction Phase	\$ 1,380,128.00	\$161,910.00	\$ 1,542,038.00
Completion Phase	\$ 125,000.00		\$ 125,000.00
Total Fee	\$2,828,122.00	\$161,910.00	\$2,990,032.00

This Amendment is a result of: Brookline's request for extending the duration of supplemental Site Representative support services for a limited period as outlined in Exhibit B. _____

3. The Construction Budget shall be as follows:

Original Budget: \$137,600,000.00 _____

Amended Budget \$137,600,000.00 _____

4. The Project Schedule shall be as follows:

Original Schedule: Substantial Completion 8/30/21 _____

Amended Schedule Substantial Completion 8/30/21 (revised schedule to be addressed in a separate forthcoming Amendment) _____

5. This Amendment contains all of the terms and conditions agreed upon by the Parties as amendments to the original Contract, as amended. The Owner's Project Manager will be working in a supporting role to the Town of Brookline to the limit of the fees and effort contained in the attached EXHIBIT B. Scope not included in this amendment remains the responsibility of the Owner.

5.D.

6. Should the Owner require more services, such matters will be handled under Article 9 of the Agreement.
7. Owner's Project Manager may adjust hours in EXHIBIT B to accommodate the Owner.
8. No other understandings or representations, oral or otherwise, regarding amendments to the original Contract, as amended, shall be deemed to exist or bind the Parties, and all other terms and conditions of the Contract, as amended, remain in full force and effect.

IN WITNESS WHEREOF, the Owner and the Owner's Project Manager have caused this Amendment to be executed by their respective authorized officers.

OWNER

(print name)

(print title)

By _____
(signature)

Date _____

OWNER'S PROJECT MANAGER

Dominick Fickeria
(print name)

Senior Vice President
(print title)

By _____
(signature)

Date _____

Page: 28

5.D.

pursuant to MA DOR borrowing authorization,
ToB proceeding with releasing Contracts/POs:

<u>Item</u>	<u>Company</u>	<u>Contract/PO Amount</u>
Deferred Maintenance	N.B. Kenney Co. Inc.	\$3,075,000
3 rd Floor & Tappan Gym Reno	CTA Construction Managers, LLC	\$7,821,340 (includes Bid Alt #1)
Cypress Playground	Heimlich Landscape/Const	\$5,263,523
Cypress Playground - CA	Weston & Sampson – Construction Admin. Services	\$96,000
Furniture, Fixtures and Equipment	various vendors (W.B. Mason, direct science equipment purchases by Science Dept., etc.)	\$3,100,000 (not-to- exceed budget)
Security	Lan-Tel	\$181,167.97
Technology	various ToB procured vendors	\$1,500,000 (not-to- exceed budget)
A/E	WRA Amendment #20 – Schedule extension beyond original schedule in Amendment #1	\$588,751
OPM	Hill Amendment #6 – extend Site Representative Services thru July, 2021	\$161,910
OPM	Hill (future) Amendments: reconcile MBTA-related tasks; managing (2) additional contractors; services extension (if required); some projected costs were already included within Warrant Article.	TBD and negotiated w/ToB
A/E	WRA (future) Amendments: managing (2) additional contractors; some projected costs were already included within Warrant Article.	TBD and negotiated w/ToB

ATTACHMENT B**CONTRACT FOR PROJECT MANAGEMENT SERVICES****AMENDMENT NO. 6**

WHEREAS, the Town of Brookline ("Owner") and Hill International, Inc., (the "Owner's Project Manager") (collectively, the "Parties") entered into a Contract for Project Management Services for the Brookline High School Addition and Renovation Project at 115 Greenough Street and 111 Cypress Street, Brookline, MA (the "Contract"); and

WHEREAS, effective as of February 3, 2021, the Parties wish to amend the Contract, as amended:

NOW, THEREFORE, in consideration of the promises and the mutual covenants contained in this Amendment, and other good and valuable consideration, the receipt and legal sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, hereby agree as follows:

1. The Owner hereby authorizes the Owner's Project Manager to perform services described in The Scope of Services described in previous Amendment #5/Exhibit A, and the Workplan attached as Exhibit B, pursuant to the terms and conditions set forth in the Contract, as amended.
2. For the performance of services required under the Contract, as amended, the Owner's Project Manager shall be compensated by the Owner in accordance with the following Fee for Basic Services:

Fee for Basic Services:	Original Contract thru Amendment #4	Amendment #5	Current Contract Total
Schematic Design Phase	<u>\$ 239,994.00</u>	<u> </u>	<u>\$ 239,994.00</u>
Design Development Phase	<u>\$ 414,000.00</u>	<u> </u>	<u>\$ 414,000.00</u>
Construction Document Phase	<u>\$ 460,000.00</u>	<u> </u>	<u>\$ 460,000.00</u>
Bidding Phase	<u>\$ 209,000.00</u>	<u> </u>	<u>\$ 209,000.00</u>
Construction Phase	<u>\$ 1,380,128.00</u>	<u>\$161,910.00</u>	<u>\$ 1,542,038.00</u>
Completion Phase	<u>\$ 125,000.00</u>	<u> </u>	<u>\$ 125,000.00</u>
Total Fee	<u>\$2,828,122.00</u>	<u>\$161,910.00</u>	<u>\$2,990,032.00</u>

This Amendment is a result of: Brookline's request for extending the duration of supplemental Site Representative support services for a limited period as outlined in Exhibit B. _____

3. The Construction Budget shall be as follows:

Original Budget:	<u>\$137,600,000.00</u>
Amended Budget	<u>\$137,600,000.00</u>

4. The Project Schedule shall be as follows:

Original Schedule:	<u>Substantial Completion 8/30/21</u>
Amended Schedule	<u>Substantial Completion 8/30/21 (revised schedule to be addressed in a separate forthcoming Amendment)</u>

5. This Amendment contains all of the terms and conditions agreed upon by the Parties as amendments to the original Contract, as amended. The Owner's Project Manager will be working in a supporting role to the Town of Brookline to the limit of the fees and effort contained in the attached EXHIBIT B. Scope not included in this amendment remains the responsibility of the Owner.

6. Should the Owner require more services, such matters will be handled under Article 9 of the Agreement.
7. Owner's Project Manager may adjust hours in EXHIBIT B to accommodate the Owner.
8. No other understandings or representations, oral or otherwise, regarding amendments to the original Contract, as amended, shall be deemed to exist or bind the Parties, and all other terms and conditions of the Contract, as amended, remain in full force and effect.

IN WITNESS WHEREOF, the Owner and the Owner's Project Manager have caused this Amendment to be executed by their respective authorized officers.

OWNER

(print name)

(print title)

By _____
(signature)

Date _____

OWNER'S PROJECT MANAGER

Dominick Fickeria
(print name)

Senior Vice President
(print title)

By _____
(signature)

Date 2/5/21

Page: 32

5.E.



TOWN of BROOKLINE
Massachusetts

BUILDING DEPARTMENT

Daniel Bennett
Building Commissioner

TO: Selectboard/ School Committee

FROM: Ray Masak, PE Project Manager

SUBJECT: Brookline High School- Amendment 20
Design Services (FY 19)

DATE: February 17, 2021

On the Calendar this week, the Building Department is requesting the approval of an amendment for designer services for the subject project in the total amount of \$588,751.

The appropriation for this contract was approved by Town Meeting as part of the overall CIP for FY19. This amendment is for additional construction administration services involving delays with the project. Refer to the Hill memo dated February 4, 2021 and the Rawn memo dated January 25, 2021 for further explanation of services. Per the attached table, these additional services were part of the warrant article discussion.

The Building Department will be available on Tuesday evening to answer any questions. Thank you for your consideration.



Hill International

Hill International, Inc.
75 Second Avenue, Suite 300
Needham, MA 02494
Tel: 617-778-0900
Fax: 617-778-0999
www.hillintl.com

February 4, 2021

Mr. Ray Masak, P.E.
Project Manager
Town of Brookline Building Department
333 Washington Street
Brookline, MA 02445

Re: William Rawn Associates Amendment 20 – Schedule Extension CA Services

Dear Mr. Masak:

We have received and reviewed WRA's Amendment which requests formal extension to their CA services on STEM and 22 Tappan which are beyond the timelines previously approved in their Amendment #1/Exhibit F. Signed back in July 2018, their Amendment #1 original schedule for CA services had anticipated STEM substantial completion in December 2020 and 22 Tappan substantial completion in July 2021. This Amendment #20 requests to formally extend their CA services, at a reduced rate, to match up with Skanska's final GMP schedules of July 2021 (STEM) and November 2021 (22 Tappan) Substantial Completion.

Back in May 2020, WRA had submitted a DRAFT letter of the proposed Schedule Extension to ToB and Hill for review after Skanska's GMP schedule was established, but their Amendment request was not recommended at that time. Hill did include the potential costs as a placeholder within the Fall 2020 Warrant Article budget increase. WRA subsequently revised and resubmitted their request formally in December 2020, but it was returned with comments. The final revised/discounted amount of the Amendment is actually lower than what was forecasted in the approved budget increase.

What is *not* covered in this Amendment are:

- any CA services revisions required, if any, related to the MBTA platform construction schedule. It will depend on MBTA's final decision relating to either a bypassed station vs phased project (negotiations on-going, to be determined).
- Potential additional A/E fees (still to be negotiated) associated with managing multiple contractors for Tappan Gym, 3rd Floor renovations, Deferred Maintenance, Streetscapes, etc. since other companies, besides Skanska, will be constructing those other areas.

Hill recommends approval of the \$588,751 Amendment #20.

Very truly yours,



Andy Felix
Project Director

pursuant to MA DOR borrowing authorization,
ToB proceeding with releasing Contracts/POs:

<u>Item</u>	<u>Company</u>	<u>Contract/PO Amount</u>
Deferred Maintenance	N.B. Kenney Co. Inc.	\$3,075,000
3 rd Floor & Tappan Gym Reno	CTA Construction Managers, LLC	\$7,821,340 (includes Bid Alt #1)
Cypress Playground	Heimlich Landscape/Const	\$5,263,523
Cypress Playground - CA	Weston & Sampson – Construction Admin. Services	\$96,000
Furniture, Fixtures and Equipment	various vendors (W.B. Mason, direct science equipment purchases by Science Dept., etc.)	\$3,100,000 (not-to- exceed budget)
Security	Lan-Tel	\$181,167.97
Technology	various ToB procured vendors	\$1,500,000 (not-to- exceed budget)
A/E	WRA Amendment #20 – Schedule extension beyond original schedule in Amendment #1	\$588,751
OPM	Hill Amendment #6 – extend Site Representative Services thru July, 2021	\$161,910
OPM	Hill (future) Amendments: reconcile MBTA-related tasks; managing (2) additional contractors; services extension (if required); some projected costs were already included within Warrant Article.	TBD and negotiated w/ToB
A/E	WRA (future) Amendments: managing (2) additional contractors; some projected costs were already included within Warrant Article.	TBD and negotiated w/ToB

WILLIAM RAWN ASSOCIATES | Architects, Inc.

10 Post Office Sq.
 Suite 1010
 Boston, MA 02109
 t. 617.423.3470
 www.rawnarch.com

Ray Masak
 Project Manager
 Town of Brookline Building Department
 Brookline Town Hall
 333 Washington Street
 Brookline, MA 02445

January 25, 2021

Project Name: Brookline High School Expansion Project
Re: Contract Amendment #20: Additional Service Proposal for 22 Tappan (Cypress Building) and STEM Wing Construction Schedule Extensions

CC: Andy Felix, Sam Lasky

Dear Ray,

We submitted a letter on May 22, 2020 outlining additional service fees associated with construction schedule extensions beyond the substantial completion dates identified in our contract (Exhibit F). Now that completion dates have been defined in the GMP we are re-submitting the letter for STEM Wing and 22 Tappan schedule extensions. Article 8.3 in our contract with the Town allows for extra compensation for Construction Phase Services beyond the original construction completion date.

The additional fees outlined for each project below have been extrapolated from our monthly Construction Administration fees based on the construction cost of each project. At the Town's request we have also looked at this from an FTE standpoint.

If we reduced the staff on the STEM project to only Rob Wear, or 1 FTE, the monthly additional service fee would be \$48,881 based on the hourly rates listed in Exhibit D of the contract. We are proposing a monthly fee of \$42,064 which equates to .86 FTEs. For 22 Tappan we are proposing a monthly fee of \$64,1010 or 1.3 FTEs. The proposed .86 and 1.3 FTE values are significantly less than "regular" Construction Administration staffing on the project in recognition that the added work during the extended schedule period will not be the same as it was during most of the job. For example, as construction continues during 2021, the effort to review submittals and respond to RFIs will be reduced as Skanska moves toward their target of processing all submittals by the end of this month. We will continue to support the project with the team leaders and staff that are in place and hope the Town finds the following fee proposal to be fair and reasonable.

STEM WING

The STEM Wing substantial completion date has been extended by Skanska for several reasons:

WILLIAM RAWN ASSOCIATES | Architects, Inc.

Page 1 of 3

- Substantial demolition of the Roberts Wing was completed 1 month late in October 2019
- Full demolition of the Roberts Wing was scheduled for the December holiday break. Full demolition was delayed until February break 2020. This delay was due to unforeseen conditions between the Roberts Wing and the STEM Wing. The east wall of the remaining Roberts Wing had to be structurally reinforced to complete the demolition of the remaining walls and foundations of the Roberts Wing. Contract Amendment #13 provided extra compensation to the design team for design and engineering services.
- Concurrent with unforeseen conditions the Covid-19 pandemic began to delay construction. The precast planks were held up due to State of Vermont pandemic guidelines.
- Underpinning was required below the remaining east wall of the Roberts Wing prior to the installation of the foundation and steel superstructure

Owner/Architect Contract Exhibit F Substantial Completion Date: December 1, 2020
 Current GMP Substantial Completion Date: July 7, 2021
 Construction Schedule Extension: 7 months, 6 days

Based on our analysis of current monthly fees as outlined in the 5/22/20 letter, we propose the following reduced fees per month:

Project C STEM Wing	\$42,064
<u>Duration</u>	<u>7 months, 6 Days (7.2 months)</u>
STEM Wing Extra Compensation:	\$302,861

22 TAPPAN (CYPRESS BUILDING)

The construction schedule for 22 Tappan was extended due to construction delays associated with the MBTA licensing agreement and the Covid-19 pandemic. The delivery of the license agreement was late due to the MBTA missing their deadline which impacted the planned sequence of construction between the building and the overhead catenary support (OCS) relocation project on the north side of the railroad tracks. The installation of the concrete foundations were slowed when the carpenters union kept the concrete formwork team off the job at the beginning of the pandemic in March and April 2020.

Owner/Architect Contract Exhibit F Substantial Completion Date: July 1, 2021
 Current GMP Substantial Completion Date: November 15, 2021
 Construction Schedule Extension: 4 months, 14 days

Based on our analysis of current monthly fees as outlined in the 5/22/20 letter, we propose the following reduced fees per month:

Project A Cypress Building (22 Tappan)	\$64,101
<u>Duration</u>	<u>4 months, 14 days (4.46 days)</u>
22 Tappan Extra Compensation:	\$285,890 months

Contract Amendment #20 Extra Compensation Fee Proposal Summary

STEM Wing Extra Compensation: \$302,861

22 Tappan Extra Compensation: \$285,890

Grand Total: **\$588,751** *OK MM*

WILLIAM RAWN ASSOCIATES I Architects, Inc.

Please note the MBTA (Project H) is not included in this proposal since construction schedule negotiations are still in process with the MBTA. Please let us know if you have any questions.

We are looking forward to working with the Town and Skanska to bring the High School Expansion project to completion.

Regards,

A handwritten signature in black ink, appearing to read 'AJ' followed by a stylized flourish.

Andy Jonic, AIA
Senior Associate
William Rawn Associates, Architects Inc.

Attachments: May 22, 2020 construction schedule extension letter, Monthly Invoice Forecast

ATTACHMENT F

CONTRACT FOR DESIGNER SERVICES

AMENDMENT NO. 20 _____

WHEREAS, the Town of Brookline _____ ("Owner") and William Rawn Associates, Architects Inc. _____, (the "Designer") (collectively, the "Parties") entered into a Contract for Designer Services for the _____ Brookline High School Expansion _____ Project (Purchase Order # 21803108) at the Brookline High _____ School on _____ July 6, 2018 _____, "Contract"; and

WHEREAS, effective as of _____ January 25, 2021 the Parties wish to amend the Contract:

NOW, THEREFORE, in consideration of the promises and the mutual covenants contained in this Amendment, and other good and valuable consideration, the receipt and legal sufficiency of which are hereby acknowledged, the Parties, intending to be legally bound, hereby agree as follows:

1. The Owner hereby authorizes the Designer to perform services for the Design Development Phase, the Construction Phases, and the Final Completion Phase of the Project, pursuant to the terms and conditions set forth in the Contract, as amended.
2. For the performance of services required under the Contract, as amended, the Designer shall be compensated by the Owner in accordance with the following Fee for Basic Services:

Fee for Basic Services:	Original Contract*	After this Amendment:
		Amendment fee: \$588,751
Feasibility Study Phase	\$ _____	\$ _____
Schematic Design Phase	\$ _____	\$ _____
Design Development Phase	\$ _____	\$ _____
Construction Document Phase	\$ _____	\$ _____
Bidding Phase	\$ _____	\$ _____
Construction Phase	\$ _____	\$ _____
Completion Phase	\$ _____	\$ _____
*Includes previous Amendments		
Total Fee	<u>\$14,261,365.00</u> ✓	<u>\$14,2850,116.00</u> \$14,850,116.00

This Amendment is a result of: Extended construction schedules for 22 Tappan (Cypress Building) and the STEM Wing beyond the durations listed in the WRA's contract with the Town (see Exhibit F)

v.10.27.15

3. The Construction Budget shall be as follows:

Original Budget: \$n/a _____

Amended Budget \$n/a _____

4. The Project Schedule shall be as follows:

Original Schedule: \$n/a _____

Amended Schedule \$n/a _____

5. This Amendment contains all of the terms and conditions agreed upon by the Parties as amendments to the original Contract. No other understandings or representations, oral or otherwise, regarding amendments to the original Contract shall be deemed to exist or bind the Parties, and all other terms and conditions of the Contract remain in full force and effect.

IN WITNESS WHEREOF, the Owner, with the prior approval of the Authority, and the Designer have caused this Amendment to be executed by their respective authorized officers.

OWNER

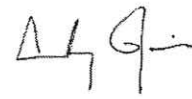
(print name)_____
(print title)By _____
(signature)

Date _____

DESIGNER

Andrew Jonic _____
(print name)Senior Associate _____
(print title)

By _____



(signature)

Date 1/25/21 _____

WILLIAM RAWN ASSOCIATES | Architects, Inc.

10 Post Office Sq.
Suite 1010
Boston, MA 02109
t. 617.423.3470
www.rawnarch.com

Ray Masak
Project Manager
Town of Brookline Building Department
Brookline Town Hall
333 Washington Street
Brookline, MA 02445

May 22, 2020

Project Name: Brookline High School Expansion Project
Re: Design Fee Adjustment Scenarios Due to Covid-19 Construction Delays
CC: Andy Felix, Sam Lasky

Additional Service Scenarios for: Schedule extension due to COVID-19 virus

Dear Ray,

The schedule for the Brookline High School Expansion Project has been extended beyond planned substantial completion dates due to the COVID-19 virus. At the request of the Town, this memo outlines additional design and engineering fees associated with the change in construction durations between Exhibit F in the WRA/ToB contract and Skanska's current schedule (5/11/2020). According to the Contract for Design Services, Article 8.4 allows for Extra Services compensation in the case of an emergency.

Per Exhibit A, the fee for all design team consultants for Construction Administration is \$3,745,057. Presently, we are invoicing a "straight line" rate of \$162,910 per month over the course of 23 months per the Exhibit F schedule. Given that Cypress, STEM (including BHS elevator refurbishment), and the MBTA project have varying schedule and delays, we thought it would be fair to the Town to identify additional service fee scenarios for each of these projects. We also understand design team efforts will be reduced later in the project, so fees will be lower.

Based on the scale and scope of each project, the following is a breakdown of the current \$162,910 monthly invoicing rate:

Project A Cypress	50%	\$81,455
Project B STEM, Tappan, 3 rd Floor, Deferred Maint.	39%	\$63,577*
Project H MBTA	11%	\$17,878
Total Monthly Fee:	100%	\$162,910

**Monthly Fee covers STEM currently and will cover CA effort on Tappan, 3rd floor, and deferred maintenance once STEM is complete.*

5.E.

We determined a reduced cost per month for each project and applied it to the schedule extension timelines:

Project A (Cypress)

Exhibit F Construction Schedule Timeline (Demo to Sub. Completion) Duration	9/1/19 to 7/1 21 22 months (95 wks.)
Skanska Construction Schedule (Demo to Sub. Completion)* Duration	9/16/19 to 12/7/21 26 months (116 wks.)
Current Schedule Extension	4.84 months (21 wks.)
Current Cypress Design Team Fees per Month:	\$81,455
Proposed Cypress Design Team Fees per Month:	\$64,101

Project A (Cypress) Schedule Extension Scenarios

Scenario #1: Additional Fee for 4.84 additional months	\$310,667
Scenario #2: Additional Fee for 5 additional months	\$320,505
Scenario #3: Additional Fee for 6 additional months	\$384,606
Scenario #4: Additional Fee for 7 additional months	\$448,707
Scenario #5: Additional Fee for 8 additional months	\$512,808

**Substantial Completion Date from Skanska's 5/11/20 Schedule Update*

Project C (STEM Wing)

Exhibit F Construction Schedule Timeline + Enabling (Demo to Sub. Completion) Duration	5/1/19 to 12/1 21 19 months (82 wks.)
Skanska Construction Schedule (Enabling)	6/12/19 to 8/21/19
Skanska Construction Schedule (Demo to Sub. Completion)* Duration	8/21/19 to 7/7/21 24.7 Months (107 wks.)
Current Schedule Extension	5.77 months (25 wks.)
Current STEM Design Team Fees per Month:	\$63,577
Proposed STEM Design Team Fees per Month:	\$42,064

Project C (STEM) Schedule Extension Scenarios

Scenario #1: Additional Fee for 5.77 additional months	\$242,863
Scenario #2: Additional Fee for 6 additional months	\$252,384
Scenario #3: Additional Fee for 7 additional months	\$294,448
Scenario #4: Additional Fee for 8 additional months	\$336,512
Scenario #5: Additional Fee for 9 additional months	\$378,576

**Substantial Completion Date from Skanska's 5/11/20 Schedule Update*

Project H (Brookline Hills MBTA Platform)

Exhibit F Construction Schedule Timeline + Enabling (Demo to Sub. Completion) No Schedule Avail.

2/16/19 Skanska Construction Schedule (Mobilize to Sub. Completion) Duration	8/14/19 to 8/25/21 24 Months (105 wks.)
4/13/20 Skanska Construction Schedule (Mobilize to Sub. Completion)* Duration	8/14/19 to 11/18/21 27.4 Months (118 wks.)
Current Schedule Extension	3 months (13 wks.)
Current MBTA Design Team Fees per Month:	\$17,878
Proposed MBTA Design Team Fees per Month:	\$15,592

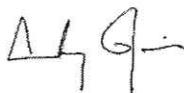
Project H (Brookline Hills MBTA Platform) Schedule Extension Scenarios

Scenario #1: Additional Fee for 3 additional months	\$46,776
Scenario #2: Additional Fee for 4 additional months	\$62,368
Scenario #3: Additional Fee for 5 additional months	\$77,960
Scenario #4: Additional Fee for 6 additional months	\$93,552
Scenario #5: Additional Fee for 7 additional months	\$109,144

**Substantial Completion Date from Skanska's 5/11/20 Schedule Update*

We hope this summary of schedule extension scenarios is helpful to the Town as the Co-Chairs and Hill prepare for the June Town Meeting. We are hopeful the construction working environment improves significantly and the actual durations are reduced. If the durations are less than those shown above, additional service fees will be reduced.

Regards,



Andy Jonic, AIA
Senior Associate
William Rawn Associates, Architects Inc.

5.F.



TOWN of BROOKLINE

Massachusetts

BUILDING DEPARTMENT

Daniel Bennett
Building Commissioner

TO: Selectboard

FROM: Ray Masak, PE Project Manager

SUBJECT: High School Expansion Project – Deferred Maintenance
NB Kenney Contract (FY 21)

DATE: February 17, 2020

On the Calendar this week, the Building Department has submitted a request for Contract Approval for the subject project in the amount of \$3,075,000. This project was part of the additional funding requested by a warrant article approved by Town Meeting and DOR (refer to the Hill letter dated February 5, 2021).

The subject project was approved as part of the High School Project and was designed by Willian Rawn Associates. Construction will commence upon contract execution and is expected to be completed by the end of November 2021.

Bids were received on October 6, 2020. A total of 5 bids were submitted. The OPM (Hill) reviewed the bids and determined that NB Kenney is the lowest and responsible bidder. Based upon the Hill's recommendation, we are requesting award of contract to NB Kenney.

The Building Department is available to answer any questions you may have. Thank you for your consideration.

Town Of Brookline

Contract Coding Approval Form

Department: BuildingVendor Name : NB KenneyVendor Number : _____ Amount of Contract \$ 3,075,000

Contract # : _____


Purpose of Contact:

Description:
<u>Deferred maintenance: Boiler / mechanical</u>
<u>Equipment Replacement</u>

Coding:

Org #	Org Name *	Acct #	Acct Name	Amount
25940204		600002		3,075,000

* For "K" or "C" accounts, please call it "CIP", preceded by your Dept (e.g., 4909K001 would be "DPW CIP").

Department Head:  Date 2-10-21Comptroller and Purchasing ApprovalsFunds Available / Codes Correct 
Comptroller2/10/2021
Date Approved by ComptrollerComplies with Appropriate Procurement Law
(MGL ch 149, ch 30 30M, or ch 30B)
Purchasing2/10/21
Date Approved by Purchasing



Hill International, Inc.
 75 Second Avenue, Suite 300
 Needham, MA 02494
 Tel: 617-778-0900
 Fax: 617-778-0999
 www.hillintl.com

February 5, 2021

Mr. Ray Masak, P.E.
 Project Manager
 Town of Brookline Building Department
 333 Washington Street
 Brookline, MA 02445

RE: Recommendation to award various contracts/purchase orders pursuant to MA DOR decision

Dear Mr. Masak:

Following review of the MA DOR decision with co-Chairs on February 1, 2021, we are now able to recommend ToB proceed with contracts/purchase orders (POs) as follows:

<u>Item</u>	<u>Company</u>	<u>Contract/PO Amount</u>
Deferred Maintenance	N.B. Kenney Co. Inc.	\$3,075,000
3 rd Floor & Tappan Gym Reno	CTA Construction Managers, LLC	\$7,821,340 (includes Bid Alt #1)
Cypress Playground	Heimlich Landscape/Const	\$5,263,523
Cypress Playground - CA	Weston & Sampson – Construction Admin. Services	\$96,000
Furniture, Fixtures and Equipment	various vendors (W.B. Mason, direct science equipment purchases by Science Dept., etc.)	\$3,100,000 (not-to- exceed budget)
Security	Lan-Tel	\$181,167.97
Technology	various ToB procured vendors	\$1,500,000 (not-to- exceed budget)
A/E	WRA Amendment #20 – Schedule extension beyond original schedule in Amendment #1	\$588,751
OPM	Hill Amendment #6 – extend Site Representative Services thru July, 2021	\$161,910
OPM	Hill (future) Amendments: reconcile MBTA-related tasks; managing (2) additional contractors; services extension (if required); some projected costs were already included within Warrant Article.	TBD and negotiated w/ToB
A/E	WRA (future) Amendments: managing (2) additional contractors; some projected costs were already included within Warrant Article.	TBD and negotiated w/ToB

5.F.

To minimize logistical challenges with completing Streetscapes scope at same time as Tappan Gym Renovations, STEM, 22 Tappan & MBTA Station and the beginning of Cypress Playground project (all in 2021), ToB has decided to separately bid thru DPW the Streetscapes, Traffic Signals, Pavement Striping scopes of work. Traffic Signals re-configuration would be constructed Fall 2021 and Streetscapes & Pavement Striping would occur Summer of 2022 to coincide with completion of Cypress Playground.

We are updating the overall total project budget to reflect the approved funding increase per MA DOR decision.

Very truly yours,

A handwritten signature in dark ink, appearing to read "Andy Felix".

Andy Felix, MCPPO
Project Director



Hill International, Inc.
75 Second Avenue, Suite 300
Needham, MA 02494
Tel: 617-778-0900
Fax: 617-778-0999
www.hillintl.com

November 19, 2020

Mr. Ray Masak, P.E.
Project Manager
Town of Brookline Building Department
333 Washington Street
Brookline, MA 02445

RE: N.B Kenney Bid for Brookline HS Deferred Maintenance Project

Dear Mr. Masak:

Hill International has reviewed the general bids for the Brookline HS Deferred Maintenance Project received on September 29, 2020. There were five general bids submitted for this project. The lowest bid was N.B. Kenney Company, Inc at \$3,075,000. Hill has checked references on N.B Kenney and received seven project references. All seven project references provided good recommendations for N.B. Kenney on their planning and construction of similar HVAC projects. All were reported to be under budget, completed on schedule and with no issues on the quality of work. N.B. Kenney was also a prequalified sub-bidder for the Brookline High School Expansion Project. They received five preferred recommendations during the pre-qualification process in March 2019.

Based on our review of the bid and the feedbacks received from the project references we believe N.B. Kenney's bid is low and responsive. Hill takes no exception in award of the Contract to N.B Kenney as the General Contractor for the Brookline HS Deferred Maintenance Project.

Very truly yours,

A handwritten signature in dark ink, appearing to read "Paul G. Kalous".

Paul G. Kalous AIA, MCPPO
Program Director

Attachments:

Bid from N.B. Kenney
Project References from 7 similar Projects

cc. C.Aubin, William Rawn Associates, Architects

Brookline High School Project - Deferred Maintenance

Tabulation of General Contractor Bids

10/6/2020

General bids due: 2:00PM, Tuesday, October 6, 2020



Hill International

	General Contractor	Bid, no alternates	Alt.	Total	Addenda	Bid Signed	Bid Bond or Deposit	DCAMIM Cert & Update Statement
1	N.B. Kenney Company, Inc.	\$3,075,000.00	\$0.00	\$3,075,000.00	1,2,3,4	Yes	Yes	Yes
2	Enterprise Equipment Co., Inc.	\$3,148,280.00	\$14,300.00	\$3,162,580.00	1,2,3,4	Yes	Yes	Yes
3	E. Amanti & Sons, Inc.	\$3,578,000.00	\$0.00	\$3,578,000.00	1,2,3,4	Yes	Yes	Yes
4	J.F. White Contracting Company	\$3,672,000.00	\$5,000.00	\$3,677,000.00	1,2,3,4	Yes	Yes	Yes
5	Patrick J Kennedy & Sons, Inc	\$3,763,000.00	\$15,000.00	\$3,778,000.00	1,2,3,4	Yes	Yes	Yes

5.F.

Brookline High School Project - Deferred Maintenance

Comparison to Estimated Trade Values



General bids due: 2:00PM, Tuesday, October 6, 2020

SUMMARY

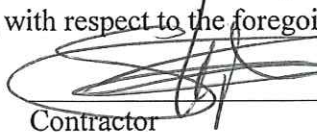
General Bids	Estimated Bid	Low Bid	Difference w/out alt:	Percent Over/Under	Accepted Alternates	ACCEPTED LOW BID	Difference between estimate and accepted bid	Comments
	\$ 3,211,928	\$ 3,075,000	\$ (136,928)	-4%	\$ -	\$ 3,075,000	\$ 136,928	
Totals:	\$ 3,211,928	\$ 3,075,000	\$ 136,928	4%	\$ -	\$ 3,075,000	\$ 136,928	

5.F.

ADDENDUM TO BHS Deferred Maintenance

Article 4.4 of the Town of Brookline General By-Laws

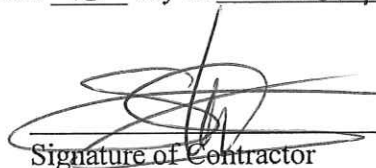
By signing below, CONTRACTOR hereby agrees to comply with the provisions of Article 4.4 of the Town's General By-laws, *Fair Employment Practices with Regard to Contracts*, a copy of which is incorporated herein by reference, with respect to the foregoing Contract.


Contractor

Article 4.5 of the Town of Brookline General By-Laws

In compliance with Article 4.5 of the Town's General By-laws, CONTRACTOR hereby certifies as follows: I shall not discriminate against any individual because of the race, color, religious creed, national origin, sex, gender identity or gender expression, sexual orientation, which shall not include persons whose sexual orientation involves minor children as the sex object, age or ancestry of any Individual in fulfilling the terms of the foregoing attached contract.

Signed under the pains of penalties of perjury, on this 10th day of FEBRUARY, 2021.


Signature of Contractor

THE AMERICAN INSTITUTE OF ARCHITECTS



AIA Document A101

Standard Form of Agreement Between Owner and Contractor

where the basis of payment is a

STIPULATED SUM

1987 EDITION

*THIS DOCUMENT HAS IMPORTANT LEGAL CONSEQUENCES; CONSULTATION WITH
AN ATTORNEY IS ENCOURAGED WITH RESPECT TO ITS COMPLETION OR MODIFICATION.*

*The 1987 Edition of AIA Document A201, General Conditions of the Contract for Construction, is adopted
in this document by reference. Do not use with other general conditions unless this document is modified.*

This document has been approved and endorsed by The Associated General Contractors of America.

AGREEMENT

made as of the _____ day of _____ in the year of _____

BETWEEN the Owner: Town of Brookline represented by the Brookline Building Commission
(Name and address) Town Hall
333 Washington Street
Brookline, MA 02445

and the Contractor:
(Name and address) NB Kenney Company, Inc.
68 Barnum Road.
Devens, MA 02134

The Project is:
(Name and location) Brookline High School Expansion
Deferred Maintenance

The Architect is:
(Name and address) William Rawn Associates, Architects Inc.
10 Post Office Square
Boston, MA 02109

The Owner and Contractor agree as set forth below.

Copyright 1915, 1918, 1925, 1937, 1951, 1958, 1961, 1963, 1967, 1974, 1977, ©1987 by The American Institute of Architects, 1735 New York Avenue, N.W., Washington, D.C. 20006. Reproduction of the material herein or substantial quotation of its provisions without written permission of the AIA violates the copyright laws of the United States and will be subject to legal prosecution.

ARTICLE 1**THE CONTRACT DOCUMENTS**

The Contract Documents consist of this Agreement, Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, Addenda issued prior to execution of this Agreement, other documents listed in this Agreement and Modifications issued after execution of this Agreement; these form the Contract, and are as fully a part of the Contract as if attached to this Agreement or repeated herein. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written or oral. An enumeration of the Contract Documents, other than Modifications, appears in Article 9.

ARTICLE 2**THE WORK OF THIS CONTRACT**

The Contractor shall execute the entire Work described in the Contract Documents, except to the extent specifically indicated in the Contract Documents to be the responsibility of others, or as follows:

The Contractor shall perform the Work required by the Contract Documents for the complete construction of the The DEFERRED MAINTENANCE, Brookline, MA. The Contractor shall provide all materials, labor, equipment, tools, machinery, transportation, and services necessary for, and reasonably incidental to, the performance of Work.

ARTICLE 3**DATE OF COMMENCEMENT AND SUBSTANTIAL COMPLETION**

3.1 The date of commencement is the date from which the Contract Time of Paragraph 3.2 is measured, and shall be the date of this Agreement, as first written above, unless a different date is stated below or provision is made for the date to be fixed in a notice to proceed issued by the Owner.

The Work to be performed under the Contract shall commence upon issuance of a "Notice to Proceed", anticipated to be issued on or about January 2, 2021

Unless the date of commencement is established by a notice to proceed issued by the Owner, the Contractor shall notify the Owner in writing not less than five days before commencing the Work to permit the timely filing of mortgages, mechanic's liens and other security interests.

3.2 The Contractor shall achieve Substantial Completion of the entire Work not later than

(Insert the calendar date or number of calendar days after the date of commencement. Also insert any requirements for earlier Substantial Completion of certain portions of the Work, if not stated elsewhere in the Contract Documents.)

The Work of the Contract shall be performed according to the Contract Documents including restrictions specified under Section 01 1100 – SUMMARY OF WORK. The Work to be performed under this Contract shall be substantially completed:

- Phase 1 Misc MEPs throughout UAB, Korrane, and Main HS – August 15, 2021
- Phase 2a Boiler #B-2 and associated work – October 15, 2021
- Phase 2b Balance of the Boiler system work – December 1, 2021
- Phase 3 Oil Tank Removal – August 15, 2022

5.F.

Liquidated Damages: The General Contractor agrees to pay the Owner for any delay in Work; the sum of one thousand dollars (\$1,000.00) per day for every calendar day beyond the above-established date; said amounts to be deemed payment for liquidated and ascertained for such delay.

ARTICLE 4 CONTRACT SUM

4.1 The Owner shall pay the Contractor in current funds for the Contractor's performance of the Contract the Contract Sum of Dollars (\$ 3,075,000 Three million seventy five thousand), subject to additions and deductions as provided in the Contract Documents.

4.2 The Contract Sum is based upon the following alternates, if any, which are described in the Contract Documents and are hereby accepted by the Owner:

(State the numbers or other identification of accepted alternates. If decisions on other alternates are to be made by the Owner subsequent to the execution of this Agreement, attach a schedule of such other alternates showing the amount for each and the date until which that amount is valid.)

Add Alternate 01 – Replacement of Existing Skylight

- a. Provide add-alternate pricing to replace-in-kind the existing skylight above the boiler plant in the UAB Building, rather than re-installing the existing skylight following completion of work on the project. This add-alternate pricing should be inclusive of any credit for work associated with re-installing the existing skylight as part of the base contract.

4.3 Unit prices, if any, are as follows:

The Unit Prices are as described in Section 01 2200 – UNIT PRICES, of these Specifications.

ARTICLE 5 **PROGRESS PAYMENTS**

5.1 Based upon Applications for Payment submitted to the Architect by the Contractor and Certificates for Payment Issued by the Architect, the Owner shall make progress payments on account of the Contract Sum to the Contractor as provided below and elsewhere in the Contract Documents.

5.2 The period covered by each Application for Payment shall be one calendar month ending on the last day of the month, or as follows:

5.3 Provided an Application for Payment is received by the Architect not later than the _____ day of a month, the Owner shall make payment to the Contractor not later than the _____ day of the _____ month. If an Application for Payment is received by the Architect after the application date fixed above, payment shall be made by the Owner not later than _____ days after the Architect receives the Application for Payment.

5.4 Each Application for Payment shall be based upon the Schedule of Values submitted by the Contractor in accordance with the Contract Documents. The Schedule of Values shall allocate the entire Contract Sum among the various portions of the Work and be prepared in such form and supported by such data to substantiate its accuracy as the Architect may require. This Schedule, unless objected to by the Architect, shall be used as a basis for reviewing the Contractor's Applications for Payment.

5.5 Applications for Payment shall indicate the percentage of completion of each portion of the Work as of the end of the period covered by the Application for Payment.

5.6 Subject to the provisions of the Contract Documents, the amount of each progress payment shall be computed as follows:

5.6.1 Take that portion of the Contract Sum properly allocable to completed Work as determined by multiplying the percentage completion of each portion of the Work by the share of the total Contract Sum allocated to that portion of the Work in the Schedule of Values, less retainage of _____ percent (_____ %). Pending final determination of cost to the Owner of changes in the Work, amounts not in dispute may be included as provided in Subparagraph 7.3.7 of the General Conditions even though the Contract Sum has not yet been adjusted by Change Order;

5.6.2 Add that portion of the Contract Sum properly allocable to materials and equipment delivered and suitably stored at the site for subsequent incorporation in the completed construction (or, if approved in advance by the Owner, suitably stored off the site at a location agreed upon in writing), less retainage of _____ percent (_____ %);

5.6.3 Subtract the aggregate of previous payments made by the Owner; and

5.6.4 Subtract amounts, if any, for which the Architect has withheld or nullified a Certificate for Payment as provided in Paragraph 9.5 of the General Conditions.

5.7 The progress payment amount determined in accordance with Paragraph 5.6 shall be further modified under the following circumstances:

5.7.1 Add, upon Substantial Completion of the Work, a sum sufficient to increase the total payments to _____ percent (_____ %) of the Contract Sum, less such amounts as the Architect shall determine for incomplete Work and unsettled claims; and

5.7.2 Add, if final completion of the Work is thereafter materially delayed through no fault of the Contractor, any additional amounts payable in accordance with Subparagraph 9.10.3 of the General Conditions.

5.8 Reduction or limitation of retainage, if any, shall be as follows:

(If it is intended, prior to Substantial Completion of the entire Work, to reduce or limit the retainage resulting from the percentages inserted in Subparagraphs 5.6.1 and 5.6.2 above, and this is not explained elsewhere in the Contract Documents, insert here provisions for such reduction or limitation.)

Delete Paragraphs 5.2 through 5.8 in their entirety, and insert the following:

The provisions of this Article are subject to the provisions of the General Laws of Commonwealth of Massachusetts, Chapter 30 Section 39K, as amended.

ARTICLE 6 FINAL PAYMENT

Final payment, constituting the entire unpaid balance of the Contract Sum, shall be made by the Owner to the Contractor when (1) the Contract has been fully performed by the Contractor except for the Contractor's responsibility to correct nonconforming Work as provided in Subparagraph 12.2.2 of the General Conditions and to satisfy other requirements, if any, which necessarily survive final payment; and (2) a final Certificate for Payment has been issued by the Architect; such final payment shall be made by the Owner not more than 60 days after the issuance of the Architect's final Certificate for Payment, or as follows:

The provisions shall be made in accordance with Chapter 30 Sections 39 F, K of the General Laws of the Commonwealth of Massachusetts, as amended

ARTICLE 7 MISCELLANEOUS PROVISIONS

7.1 Where reference is made in this Agreement to a provision of the General Conditions or another Contract Document, the reference refers to that provision as amended or supplemented by other provisions of the Contract Documents.

7.2 Payments due and unpaid under the Contract shall bear interest from the date payment is due at the rate stated below, or in the absence thereof, at the legal rate prevailing from time to time at the place where the Project is located.

(Insert rate of interest agreed upon, if any.)

(Usury laws and requirements under the Federal Truth in Lending Act, similar state and local consumer credit laws and other regulations at the Owner's and Contractor's principal places of business, the location of the Project and elsewhere may affect the validity of this provision. Legal advice should be obtained with respect to deletions or modifications, and also regarding requirements such as written disclosures or waivers.)

7.3 Other provisions: Refer to attached page

ARTICLE 8 TERMINATION OR SUSPENSION

8.1 The Contract may be terminated by the Owner or the Contractor as provided in Article 14 of the General Conditions.

8.2 The Work may be suspended by the Owner as provided in Article 14 of the General Conditions.

7.3 Other Provisions:

Contractor's Representations

The Contractor has familiarized himself with the nature and extent of the Contract Documents, work, locality, and all location conditions and federal, state, and local laws, rules, ordinances, and regulations that in any manner may affect costs, progress, or performance of the Work.

The Contractor has made, or has caused to be made, examinations, investigations, and test and studies of such reports, and related data in addition to those referred to in the paragraph above as the Contractor deems necessary for the performance of the Work at the Contract Price, within the Contract Time, and in accordance with other Terms and Conditions of the Contract Documents; and no additional examinations, tests, investigations, reports, and similar data are or will be required by the Contractor for such purposes.

The Contractor has correlated the results of such observations, examinations, investigations, tests, reports, and data with the Terms and Conditions of the Contract Documents.

The Contractor has given the Architect written notice of all conflicts, errors, or discrepancies that he has discovered in the Contract Documents, and the Written Resolution thereof by the Architect is acceptable to the Contractor.

Miscellaneous

Terms used in this Contract where are defined in Article 1 of Document 00 7200-GENERAL CONDITIONS (AIA Document A201) and Section 01 4200, REFERENCES shall have the meaning indicated in the General Conditions; other terms shall have the meanings given them in applicable publications and regulations.

No assignment by a party hereto or any rights under or interest in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically, but without limitation, monies that may become due and monies that are the effect of this restriction may be limited (by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

ARTICLE 9
ENUMERATION OF CONTRACT DOCUMENTS

9.1 The Contract Documents, except for Modifications issued after execution of this Agreement, are enumerated as follows:

9.1.1 The Agreement is this executed Standard Form of Agreement Between Owner and Contractor, AIA Document A101, 1987 Edition.

9.1.2 The General Conditions are the General Conditions of the Contract for Construction, AIA Document A201, 1987 Edition.

9.1.3 The Supplementary and other Conditions of the Contract are those contained in the Project Manual dated , and are as follows:

Document	Title	Pages
----------	-------	-------

9.1.4 The Specifications are those contained in the Project Manual dated as in Subparagraph 9.1.3, and are as follows:
(Either list the Specifications here or refer to an exhibit attached to this Agreement.)

Section	Title	Pages
---------	-------	-------

9.1.5 The Drawings are as follows, and are dated
(Either list the Drawings here or refer to an exhibit attached to this Agreement.)
 Number Title Date

unless a different date is shown below:

9.1.6 The Addenda, if any, are as follows:
 Number Date Pages

Portions of Addenda relating to bidding requirements are not part of the Contract Documents unless the bidding requirements are also enumerated in this Article 9.

9.1.7 Other documents, if any, forming part of the Contract Documents are as follows:

(List here any additional documents which are intended to form part of the Contract Documents. The General Conditions provide that bidding requirements such as advertisement or invitation to bid, instructions to bidders, sample forms and the Contractor's bid are not part of the Contract Documents unless enumerated in this Agreement. They should be listed here only if intended to be part of the Contract Documents.)

Delete Paragraphs 9.1.1 through 9.1.7 and insert the following:

The Contract Documents, which comprise the entire contract between the Owner and the Contractor, are attached to this Contract, made a part hereof, and consist of the following:

1. The Contract.
 2. Contractor's Bid, including required submittals.
 3. Bid, Performance, and Payment Bond.
 4. General Conditions (herein stated and in AIA Document A201).
 5. Modifications to General Conditions.
 6. Supplementary Conditions.
 7. Specifications bearing the title: Deferred Maintenance
 8. AIA Construction Documents, including but not limited to AIA Document A201, A310, A311, selected for use by the Town of Brookline, Massachusetts.
 9. All Addenda issued prior to Bid Preparation.
 10. Documentation submitted by Contractor during the Performance of the Contract.
 11. Contract Drawings.
 12. Town of Brookline Standard Signature Sheet, which will be provided separately as Page 9 of this Contract.
- There are no Contract Documents other than those listed in this Article. The Contract Documents may only be altered, amended, or repealed by a Modification as defined in Section 1 of the General Conditions.

This Agreement is entered into as of the day and year first written above and is executed in at least three original copies of which one is to be delivered to the Contractor, one to the Architect for use in the administration of the Contract, and the remainder to the Owner.

OWNER Refer to attached
Signature Page

(Signature)

(Printed name and title)

CONTRACTOR NB Kenney Company, Inc.

(Signature)

Steven P. Kenney
President

(Printed name and title)

5.F.

This Agreement entered into as of the day and year first written above

APPROVAL OF OWNER

Selectboard

Building Commission

Approved as to Form

School Committee

Town Counsel

CERTIFICATION

I hereby certify in accordance with Mass. Gen. Laws ch. 44 paragraph 31 C that an appropriation in the amount of the Contract Sum has been made and is available for compensation to the Contractor for the work described in this agreement.

Town Comptroller

RECORDING REQUESTED BY, AND
WHEN RECORDED, RETURN TO:

Goulston & Storrs PC
400 Atlantic Avenue
Boston, MA 02110
Attn: Steven Schwartz, Esq.

DECLARATION OF RESTRICTIVE COVENANT

This DECLARATION OF RESTRICTIVE COVENANT (the “**Restrictive Covenant**”) is executed effective as of this ____ day of February, 2021 (the “**Effective Date**”), by THE RESIDENCES OF SOUTH BROOKLINE, LLC, a Massachusetts limited liability company (“**Owner**”), in favor of THE TOWN OF BROOKLINE, acting by and through its SELECT BOARD (the “**Town**”). ROSB Realty LLC, a Massachusetts limited liability company (“**Ground Lessor**”), joins in the execution and delivery of this Restrictive Covenant to be bound by the obligations of Owner as set forth herein.

RECITALS

A. Ground Lessor is the owner of the fee interest in that certain property located in Brookline, Norfolk County, Massachusetts, as more particularly described on Exhibit A attached hereto (the “**Property**”), pursuant to Quitclaim Deed dated November 7, 2019, and recorded with the Norfolk County Registry of Deeds (the “**Registry**”) on November 18, 2019 in Book 37352, Page 154.

B. Ground Lessor conveyed a leasehold interest in the Property to Owner pursuant to that certain Ground Lease dated as of December 30, 2019, evidenced by that certain Notice of Ground Lease dated as of December 30, 2019, and recorded with the Registry on December 31, 2019 in Book 37492, Page 62.

C. The Town’s Zoning Board of Appeals (the “**Board**”) granted a comprehensive permit to Owner pursuant to M.G.L. c. 40B by virtue of a Decision filed with the Town Clerk on February 20, 2015 and recorded with the Registry on November 1, 2019 in Book 37307, Page 241, as amended by the Board’s Decision approving insubstantial changes to the comprehensive permit filed with the Town Clerk on April 30, 2019 and recorded with the Registry on November 1, 2019 in Book 37307, Page 277, the Board’s Decision approving insubstantial changes to the comprehensive permit filed with the Town Clerk on November 6, 2019 and recorded with the Registry on November 18, 2019 in Book 37352, Page 116, and the Board’s approval of insubstantial changes to the comprehensive permit pursuant to the Board’s unanimous vote at a public meeting held on December 7, 2020 (as of the date hereof, the Board’s issuance of its Decision is forthcoming) (as so amended, and as may be further amended from time to time, the “**Comprehensive Permit**”).

D. Owner intends to improve the Property with a multi-family residential development (the “**Development**”) pursuant to the terms and conditions of the Comprehensive Permit.

E. As a condition to granting the Comprehensive Permit, the Town has required that Owner make certain covenants and agreements prohibiting the construction of additional new buildings or paved surfaces on the Property not permitted under the Comprehensive Permit.

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which hereby are acknowledged, Owner hereby agrees as follows:

1. Owner shall not construct, or allow any other party to construct, any additional new buildings or paved surfaces on the Property not permitted by the Comprehensive Permit.

2. The restrictions set forth in this Restrictive Covenant shall not prohibit Owner from seeking or obtaining approval from the Board to amend the Comprehensive Permit.

3. Owner and the Town acknowledge that, by reason of the applicability of M.G.L. c. 184, sec. 27, the restrictions set forth in this Restrictive Covenant will not be enforceable after the date that is thirty (30) years after the Effective Date unless a notice of restriction is recorded with the Registry in accordance with the requirements set forth in M.G.L. c. 184, sec. 27, as the same may hereafter be amended. Accordingly, Owner and the Town hereby agree to execute, deliver and record with the Registry, from time to time such documents and instruments as may be necessary under M.G.L. c. 184, sec. 27, as the same may hereafter be amended, to extend the effect of the restrictions set forth in this Restrictive Covenant.

4. Notwithstanding anything to the contrary set forth in this Restrictive Covenant, in the event that the Property ceases to be used for the purposes contemplated under the Comprehensive Permit, then this Restrictive Covenant shall terminate and be of no further force and effect. Furthermore, if after the date that Owner commences construction of the Development, any portion of the Property or Development is damaged by casualty, condemnation or force majeure, such that Owner, in its sole and absolute discretion, cannot operate the Property or the Development as contemplated under the Comprehensive Permit, then this Restrictive Covenant shall terminate and be of no further force and effect.

5. This Restrictive Covenant shall be governed by the laws of the Commonwealth of Massachusetts. This Restrictive Covenant may be executed in counterparts, all of which shall constitute a single Restrictive Covenant.

6. This Restrictive Covenant may not be modified or amended in any respect unless such modification or amendment is consented to in writing by Owner and the Town and recorded with the Registry.

[Signature Pages to Follow]

EXECUTED as of the dates set forth in the acknowledgements below to be effective as of the Effective Date.

OWNER:

THE RESIDENCES OF SOUTH BROOKLINE LLC,
a Massachusetts limited liability company

By: CM-RSB Corp.,
a Massachusetts corporation,
its Manager

By: 

Name: Peter F. Poras
Title: Vice President and Treasurer
Hereunto duly authorized

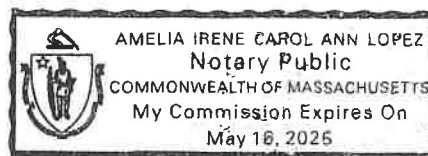
ACKNOWLEDGMENT

COMMONWEALTH OF MASSACHUSETTS)
) ss.
County of Suffolk)

On this day, before me, the undersigned notary public, personally appeared Peter F. Poras, proved to me through satisfactory evidence of identification, being (check whichever applies): ☐ driver's license or other state or federal governmental document bearing a photographic image; ☐ oath or affirmation of a credible witness known to me who knows the above signatory; or ☒ my own personal knowledge of the identity of the signatory, to be the person whose name is signed above, and acknowledged the foregoing to be signed by him as his free act and deed, voluntarily for its stated purpose as Vice President and Treasurer of CM-RSB Corp., a Massachusetts corporation, as Manager of The Residences of South Brookline LLC, a Massachusetts limited liability company, and acknowledged said instrument to be the free act and deed of The Residences of South Brookline LLC.

 , Notary Public

My Commission Expires: May 16, 2025




[Signatures continue on following page.]

GROUND LESSOR:

ROSB REALTY LLC,
a Massachusetts limited liability company

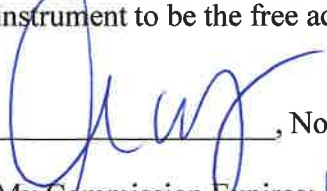
By: CM-CHR, Inc.,
a Massachusetts corporation,
its Manager

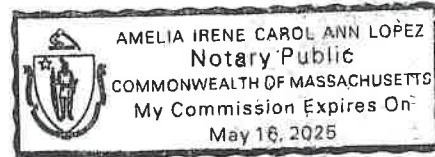
By: 
Name: Peter F. Poras
Title: Vice President and Treasurer
Hereunto duly authorized

ACKNOWLEDGMENT

COMMONWEALTH OF MASSACHUSETTS)
) ss.
County of Suffolk)

On this day, before me, the undersigned notary public, personally appeared Peter F. Poras, proved to me through satisfactory evidence of identification, being (check whichever applies): ☐ driver's license or other state or federal governmental document bearing a photographic image; ☐ oath or affirmation of a credible witness known to me who knows the above signatory; or ☒ my own personal knowledge of the identity of the signatory, to be the person whose name is signed above, and acknowledged the foregoing to be signed by him as his free act and deed, voluntarily for its stated purpose as Vice President and Treasurer of CM-CHR, Inc., a Massachusetts corporation, as Manager of ROSB Realty LLC, a Massachusetts limited liability company, and acknowledged said instrument to be the free act and deed of ROSB Realty LLC.

, Notary Public
My Commission Expires: May 16, 2025



[Signatures continue on following page.]

5.G.

TOWN:

TOWN OF BROOKLINE,
acting by and through its SELECT BOARD

By: _____
Name: _____
Title: _____
Hereunto duly authorized _____

COMMONWEALTH OF MASSACHUSETTS)
) ss
County of _____)

On this _____ day of _____, 2021, before me, the undersigned notary public, personally appeared _____, proved to me through satisfactory evidence of identification which was _____ to be the person whose name is signed on the preceding or attached document, and acknowledged to me that _____ signed it voluntarily for its stated purpose as _____ for the Town of Brookline, acting by and through its Select Board.

Notary Public
My Commission Expires:

EXHIBIT A

PROPERTY DESCRIPTION

Real property in the Town and City of Brookline and Boston (West Roxbury District), Counties of Norfolk and Suffolk, respectively, and Commonwealth Massachusetts, described as follows:

Those certain parcels of land with the buildings and improvements thereon situated in Brookline, Norfolk County, Massachusetts, shown as Parcels 3A, 3B, 3C and 3D on that certain plan entitled “Plan of Land in Brookline/Boston, Massachusetts (Norfolk/Suffolk County)” dated September 20, 2018 prepared by Precision Land Surveying, Inc. (the “**Plan**”), which Plan is recorded with the Registry of Deeds in Plan Book 684 at Pages 61-66.

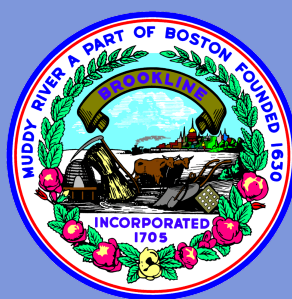
Appurtenant Rights:

Together with the appurtenant rights created under that certain Cross Easement Agreement between Edward E. Zuker and Hawood SC Corp., Trustees of Westbrook Village Realty Trust, and Edward E. Zuker, Trustee of Hancock Village Realty Trust, dated August 25, 1992, filed with Suffolk as Document No. 489914.

Together with the appurtenant rights created under that certain Amendment of Easement between Independence Drive Limited Partnership and Edward E. Zuker, Trustee of Hancock Village Realty Trust, dated December 15, 1995, filed with Suffolk as Document No. 534918. Together with the appurtenant rights created under that certain Reciprocal Easement and Maintenance Agreement between Hancock Village I LLC and Hancock Village II LLC dated as of March 3, 2008, recorded with Norfolk in Book 29555, Page 65, and filed with Norfolk as Document No. 1148137, and filed with Suffolk as Document No. 749174.

Town of Brookline FY22 Program Budget

Administration and Finance | Finance



Program Description

The Finance Department, under the direction of the Finance Director, is responsible for the implementation, oversight, integrity, and reporting of the Town's operating and capital finances. The Finance Department is comprised of the following four divisions:

Comptroller - this division is responsible for maintaining and administering a financial accounting and management information system that provides accurate, complete, and timely information pertaining to all financial activities of Town and School departments.

Purchasing - this division is responsible for ensuring that all purchases of goods and services, including public construction, are made in accordance with state laws and are open, fair, competitive, and obtained at the lowest possible cost without sacrificing quality. This is done for all Town and School departments. The Division is also responsible for the General Services unit (Town wide postage and printing).

Assessing - this division is responsible for uniformly and accurately valuing all taxable property in town. Quality and accurate assessments ensure that all areas of town and all classes of property equitably share responsibility for their portion of the property tax levy.

Treasury - this division is responsible for the billing, collecting, and investing of all funds and the arrangement of timely disbursements of all payments to vendors, town employees, and retirees. The Division is also responsible for processing payroll for the Town and School.

FY22 Budget Line Item Report

Collapse All	FY20 Actual	FY21 Budget	FY22 Budget	2021-22 Variance	2021-22 Variance
▼ SALARIES	\$ 2,347,466	\$ 2,430,253	\$ 2,459,347	29,093	1.18%
(510101) PERMANENT FULL TIME	2,246,875	2,373,250	2,401,756	28,506	1.19%
(510102) PERMANENT PART TIME	12,000	35,503	36,090	587	1.63%
(510143) WORKING OUT OF CLASS	214	0	0	0	0.00%
(510201) TEMPORARY FULL TIME	196	0	0	0	0.00%
(510300) OVERTIME PAY	1,330	468	468	0	0.00%
(510901) PART TIME TEMPORARY SAL	1,823	0	0	0	0.00%
(513044) LONGEVITY PAY	17,287	15,533	15,533	0	0.00%
(514501) EXTRA COMPENSATION	122	0	0	0	0.00%
(514510) SICK PAY BUYOUT	10,000	0	0	0	0.00%
(515058) VACATION BUYOUT	25,242	0	0	0	0.00%
(515059) A DAY BUYOUT	26,878	0	0	0	0.00%
(515501) CLOTHING-UNIFORM ALLOWANCE	5,500	5,500	5,500	0	0.00%
▼ SERVICES	837,022	868,459	849,334	-19,125	-2.25%
(522010) OFFICE EQUIP R & M	469	1,450	1,450	0	0.00%
(522015) D P EQUIP R & M	697	0	0	0	0.00%
(522016) COMPUTER SOFTWARE R & M	275,770	286,960	297,835	10,875	3.65%
(523011) COPY EQUIP RENTAL/LEASES	21,153	34,455	34,455	0	0.00%
(523012) PHOTOCOPY SERVICE CONTRAC	0	1,000	1,000	0	0.00%
(523016) SOFTWARE SERVICE CONTRACT	18,130	15,000	15,000	0	0.00%
(523020) SOFTWARE LICENSES	0	3,000	3,000	0	0.00%
(523071) OTHER EQUIPMENT RENTAL/LEASE	5,388	0	0	0	0.00%
(524002) OFFICE/CLERICAL SERVICES	3,795	5,500	5,500	0	0.00%
(524007) APPRAISAL SERVICES	3,138	21,000	21,000	0	0.00%
(524008) GENERAL CONSULT SERVICES	0	11,500	11,500	0	0.00%
(524010) PROFESSIONAL/TECH SERVICE	350	30,500	500	-30,000	-6,000.00%
(525002) WIRELESS COMMUNICATIONS	1,338	970	970	0	0.00%
(525022) POSTAGE	228,237	218,462	218,462	0	0.00%
(525030) PRINTING SERVICES	9,140	15,792	15,792	0	0.00%
(525060) ADVERTISING SERVICES	745	1,700	1,700	0	0.00%
(528005) CREDIT CARD SERVICE CHARGES	192,384	144,320	144,320	0	0.00%
(528010) BANKING SERVICES	54,849	49,500	49,500	0	0.00%
(528012) DEED & ATB TRANSFER FEES	106	200	200	0	0.00%
(528015) TAX TITLE COSTS	10,684	25,000	25,000	0	0.00%
(528080) SUBSCRIPTIONS	10,649	2,150	2,150	0	0.00%
▼ SUPPLIES	30,154	46,960	46,960	0	0.00%
(531012) OFFICE SUPPLIES	30,154	46,960	46,960	0	0.00%
▼ OTHER	18,841	28,707	28,707	0	0.00%
(551020) IN STATE TRAVEL -OTHER	43	700	700	0	0.00%
(551099) EDUCATION/TRAINING/CONFERENCES	9,407	18,392	18,392	0	0.00%
(552090) OTHER TRAVEL	33	500	500	0	0.00%
(553010) PROFESSIONAL DUES/MEMBERS	5,985	6,215	6,215	0	0.00%
(553020) IN STATE CONFERENCES	594	1,000	1,000	0	0.00%
(554030) FIDELITY INSURANCE	1,779	0	0	0	0.00%
(558001) CASH OVER-SHORT	1,001	1,900	1,900	0	0.00%
▼ UTILITIES	833	1,422	1,219	-203	-16.65%
(561021) GASOLINE	833	1,422	1,219	-203	-16.65%
▼ BUDGETED CAPITAL	42,369	7,630	7,630	0	0.00%
(5A0001) AUTOMOBILES	35,750	0	0	0	0.00%
(5A0017) LEASED COMPUTER EQUIPMENT	6,619	7,630	7,630	0	0.00%
Total	\$ 3,276,686	\$ 3,383,431	\$ 3,393,197	9,765	0.29%

Data filtered by EXPENSES, FINANCE and exported on February 11, 2021. Created with OpenGov

Finance - Comptroller

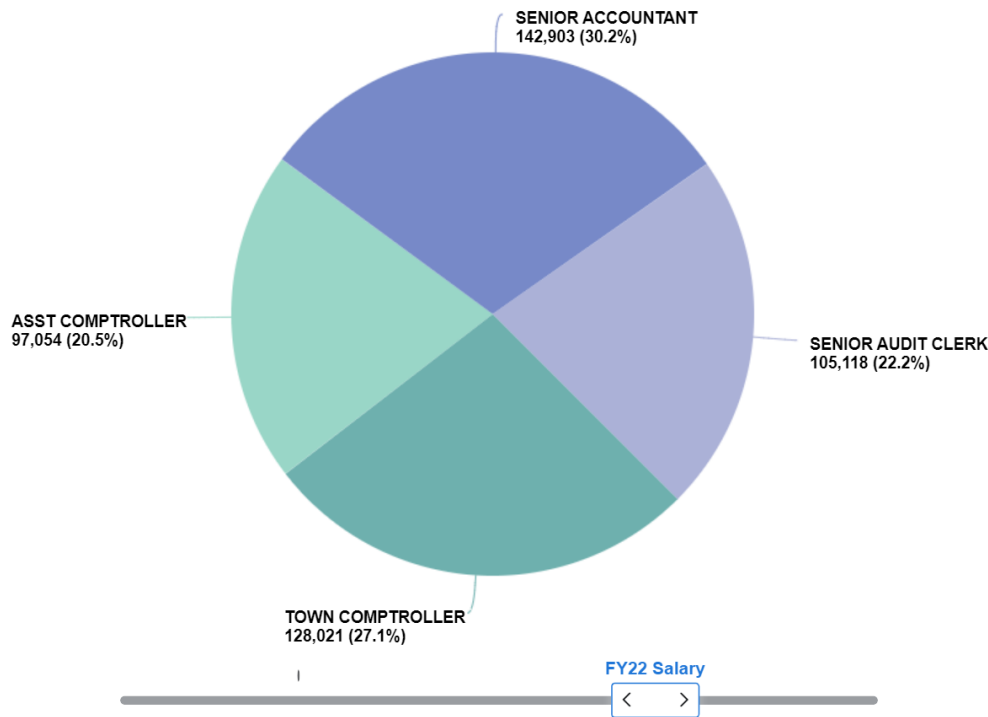
Collapse All	FY20 Actual	FY21 Budget	FY22 Budget	2021-22 Variance	2021-22 Variance
▼ SALARIES	\$ 469,052	\$ 467,680	\$ 476,846	9,166	1.92%
(510101) PERMANENT FULL TIME	452,301	463,930	473,096	9,166	1.94%
(510300) OVERTIME PAY	1,002	0	0	0	0.00%
(513044) LONGEVITY PAY	2,650	2,650	2,650	0	0.00%
(514501) EXTRA COMPENSATION	122	0	0	0	0.00%
(515058) VACATION BUYOUT	4,785	0	0	0	0.00%
(515059) A DAY BUYOUT	7,091	0	0	0	0.00%
(515501) CLOTHING-UNIFORM ALLOWANCE	1,100	1,100	1,100	0	0.00%
▼ SERVICES	229,681	215,318	223,478	8,160	3.65%
(522016) COMPUTER SOFTWARE R & M	226,996	212,460	220,620	8,160	3.70%
(523011) COPY EQUIP RENTAL/LEASES	1,824	2,358	2,358	0	0.00%
(524010) PROFESSIONAL/TECH SERVICE	350	500	500	0	0.00%
(525002) WIRELESS COMMUNICATIONS	511	0	0	0	0.00%
▼ SUPPLIES	2,752	6,000	6,000	0	0.00%
(531012) OFFICE SUPPLIES	2,752	6,000	6,000	0	0.00%
▼ OTHER	1,961	7,507	7,507	0	0.00%
(551020) IN STATE TRAVEL -OTHER	43	400	400	0	0.00%
(551099) EDUCATION/TRAINING/CONFERENCES	1,183	6,292	6,292	0	0.00%
(553010) PROFESSIONAL DUES/MEMBERS	735	815	815	0	0.00%
▼ BUDGETED CAPITAL	1,400	1,630	1,630	0	0.00%
(5A0017) LEASED COMPUTER EQUIPMENT	1,400	1,630	1,630	0	0.00%
Total	\$ 704,846	\$ 698,135	\$ 715,461	17,326	2.42%

Data filtered by EXPENSES, COMPTROLLER and exported on February 11, 2021. Created with OpenGov

FY22 FTE Salary

Used for Sect. IV Departmental budgets IBB

Visualization



	FY22 FTE	FY22 Salary
TOWN COMPTROLLER	1	128,021
ASST COMPTROLLER	1	97,054
SENIOR ACCOUNTANT	2	142,903
SENIOR AUDIT CLERK	2	105,118
Total	6	473,096

Data filtered by COMPTROLLER, GENERAL FUND, COMPTROLLER and exported on February 11, 2021. Created with OpenGov

Finance - Purchasing

Collapse All	FY20 Actual	FY21 Budget	FY22 Budget	2021-22 Variance	2021-22 Variance
▼ SALARIES	\$ 407,389	\$ 420,621	\$ 423,215	2,593	0.61%
(510101) PERMANENT FULL TIME	394,700	415,309	417,902	2,593	0.62%
(510201) TEMPORARY FULL TIME	196	0	0	0	0.00%
(513044) LONGEVITY PAY	3,667	3,663	3,663	0	0.00%
(515059) A DAY BUYOUT	7,726	0	0	0	0.00%
(515501) CLOTHING-UNIFORM ALLOWANCE	1,100	1,650	1,650	0	0.00%
▼ SERVICES	252,025	283,462	253,462	-30,000	-11.84%
(522010) OFFICE EQUIP R & M	46	250	250	0	0.00%
(523011) COPY EQUIP RENTAL/LEASES	13,556	18,038	18,038	0	0.00%
(524010) PROFESSIONAL/TECH SERVICE	0	30,000	0	-30,000	--
(525002) WIRELESS COMMUNICATIONS	513	720	720	0	0.00%
(525022) POSTAGE	228,026	217,962	217,962	0	0.00%
(525030) PRINTING SERVICES	9,140	15,292	15,292	0	0.00%
(525060) ADVERTISING SERVICES	745	1,200	1,200	0	0.00%
▼ SUPPLIES	13,856	23,960	23,960	0	0.00%
(531012) OFFICE SUPPLIES	13,856	23,960	23,960	0	0.00%
▼ OTHER	4,828	6,600	6,600	0	0.00%
(551099) EDUCATION/TRAINING/CONFERENCES	3,770	4,600	4,600	0	0.00%
(552090) OTHER TRAVEL	33	500	500	0	0.00%
(553010) PROFESSIONAL DUES/MEMBERS	1,025	1,500	1,500	0	0.00%
▼ UTILITIES	833	1,422	1,219	-203	-16.65%
(561021) GASOLINE	833	1,422	1,219	-203	-16.65%
▼ BUDGETED CAPITAL	36,622	1,300	1,300	0	0.00%
(5A0001) AUTOMOBILES	35,750	0	0	0	0.00%
(5A0017) LEASED COMPUTER EQUIPMENT	872	1,300	1,300	0	0.00%
▼ CAPITAL	6,498	0	0	0	0.00%
(6A0013) FURNITURE	6,498	0	0	0	0.00%
Total	\$ 722,051	\$ 737,365	\$ 709,756	-27,610	-3.89%

Data filtered by EXPENSES, PURCHASING and exported on February 11, 2021. Created with OpenGov

Purchasing

Expand All	FY20 Actual	FY21 Budget	FY22 Budget	2021-22 Variance	2021-22 Variance
▸ SALARIES	\$ 314,929	\$ 326,984	\$ 328,522	1,538	0.47%
▸ SERVICES	2,959	34,397	4,397	-30,000	-682.28%
▸ SUPPLIES	2,107	3,060	3,060	0	0.00%
▸ OTHER	4,828	6,600	6,600	0	0.00%
▸ UTILITIES	833	1,422	1,219	-203	-16.65%
▸ BUDGETED CAPITAL	36,622	1,300	1,300	0	0.00%
Total	\$ 362,277	\$ 373,763	\$ 345,098	-28,665	-8.31%

Data filtered by EXPENSES, PURCHASING and exported on February 11, 2021. Created with OpenGov

General Services

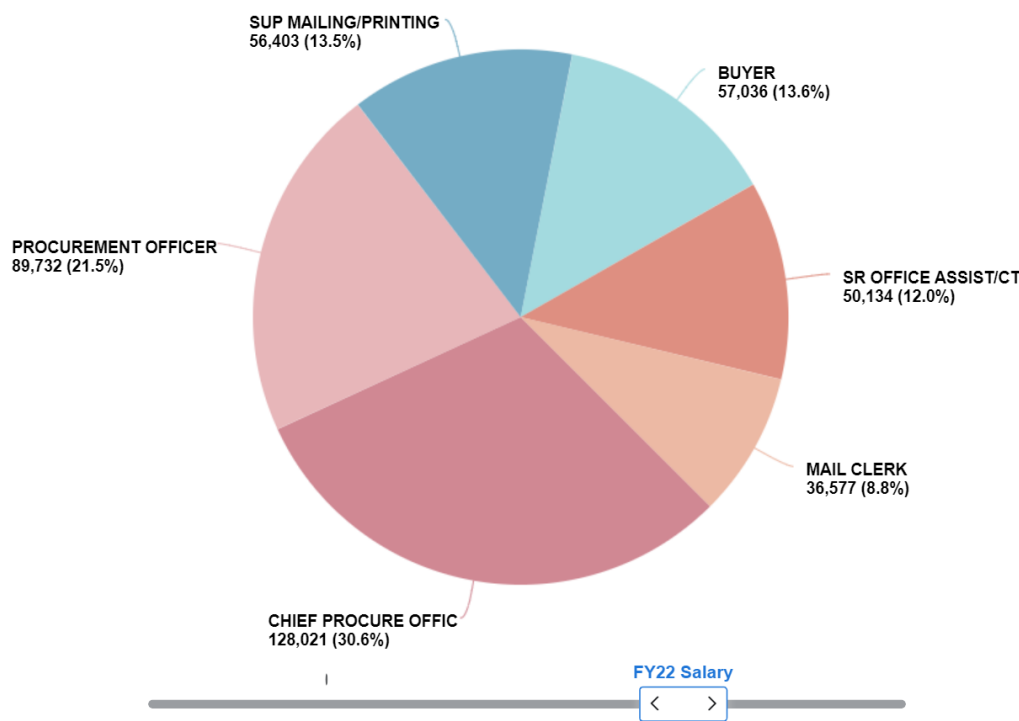
Expand All	FY20 Actual	FY21 Budget	FY22 Budget	2021-22 Variance	2021-22 Variance
▸ SALARIES	\$ 92,461	\$ 93,637	\$ 94,693	1,055	1.11%
▸ SERVICES	249,066	249,065	249,065	0	0.00%
▸ SUPPLIES	11,749	20,900	20,900	0	0.00%
Total	\$ 353,276	\$ 363,602	\$ 364,658	1,055	0.29%

Data filtered by EXPENSES, GENERAL SERVICES and exported on February 11, 2021. Created with OpenGov

FY22 FTE Salary

Used for Sect. IV Departmental budgets IBB

Visualization



	FY22 FTE	FY22 Salary
CHIEF PROCURE OFFIC	1	128,021
PROCUREMENT OFFICER	1	89,732
SUP MAILING/PRINTING	1	56,403
BUYER	1	57,036
SR OFFICE ASSIST/CT	1	50,134
MAIL CLERK	0.930	36,577
Total	5.930	417,903

Data filtered by PURCHASING, GENERAL FUND, PURCHASING and exported on February 11, 2021. Created with OpenGov

Finance - Assessing

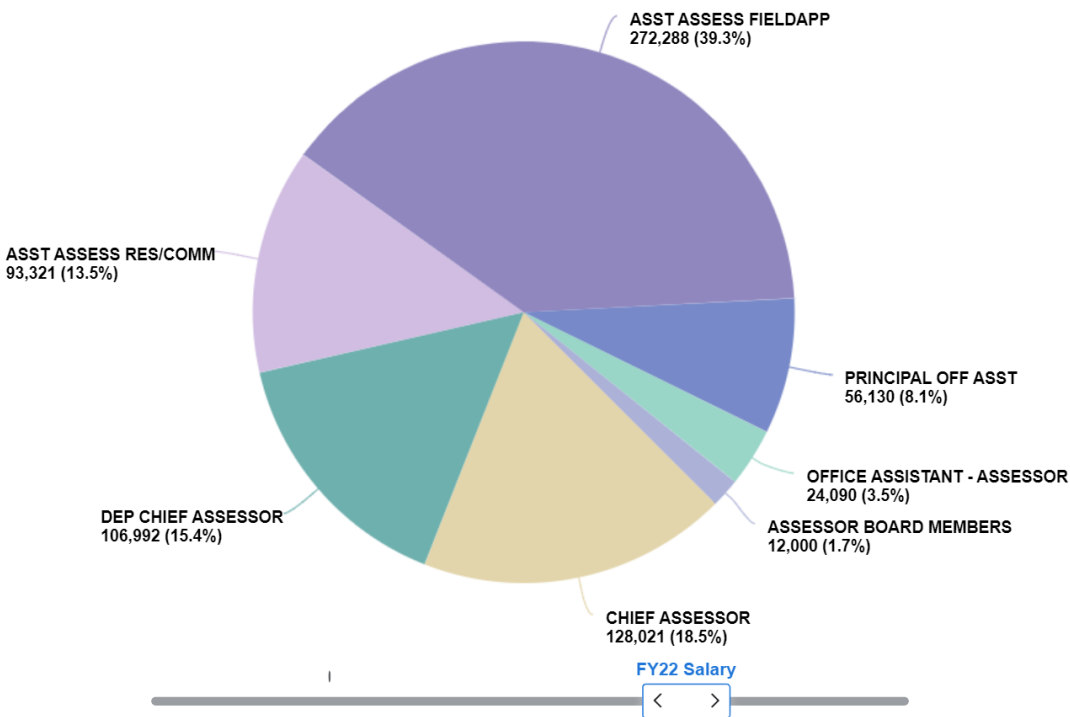
Collapse All	FY20 Actual	FY21 Budget	FY22 Budget	2021-22 Variance	2021-22 Variance
▼ SALARIES	\$ 619,791	\$ 684,800	\$ 698,562	13,762	1.97%
(510101) PERMANENT FULL TIME	560,175	643,577	656,752	13,175	2.01%
(510102) PERMANENT PART TIME	12,000	35,503	36,090	587	1.63%
(510901) PART TIME TEMPORARY SAL	1,823	0	0	0	0.00%
(513044) LONGEVITY PAY	6,920	5,170	5,170	0	0.00%
(514510) SICK PAY BUYOUT	10,000	0	0	0	0.00%
(515058) VACATION BUYOUT	20,457	0	0	0	0.00%
(515059) A DAY BUYOUT	7,867	0	0	0	0.00%
(515501) CLOTHING-UNIFORM ALLOWANCE	550	550	550	0	0.00%
▼ SERVICES	34,260	43,459	43,459	0	0.00%
(522015) D P EQUIP R & M	697	0	0	0	0.00%
(523011) COPY EQUIP RENTAL/LEASES	1,433	2,359	2,359	0	0.00%
(523016) SOFTWARE SERVICE CONTRACT	18,130	15,000	15,000	0	0.00%
(523020) SOFTWARE LICENSES	0	3,000	3,000	0	0.00%
(524002) OFFICE/CLERICAL SERVICES	125	0	0	0	0.00%
(524007) APPRAISAL SERVICES	3,138	21,000	21,000	0	0.00%
(525002) WIRELESS COMMUNICATIONS	182	250	250	0	0.00%
(528012) DEED & ATB TRANSFER FEES	106	200	200	0	0.00%
(528080) SUBSCRIPTIONS	10,449	1,650	1,650	0	0.00%
▼ SUPPLIES	2,047	2,000	2,000	0	0.00%
(531012) OFFICE SUPPLIES	2,047	2,000	2,000	0	0.00%
▼ OTHER	2,689	6,300	6,300	0	0.00%
(551020) IN STATE TRAVEL -OTHER	0	300	300	0	0.00%
(551099) EDUCATION/TRAINING/CONFERENCES	0	2,500	2,500	0	0.00%
(553010) PROFESSIONAL DUES/MEMBERS	2,095	2,500	2,500	0	0.00%
(553020) IN STATE CONFERENCES	594	1,000	1,000	0	0.00%
▼ BUDGETED CAPITAL	1,903	2,100	2,100	0	0.00%
(5A0017) LEASED COMPUTER EQUIPMENT	1,903	2,100	2,100	0	0.00%
Total	\$ 660,690	\$ 738,659	\$ 752,421	13,762	1.83%

Data filtered by EXPENSES, ASSESSING and exported on February 11, 2021. Created with OpenGov

FY22 FTE Salary

Used for Sect. IV Departmental budgets IBB

Visualization



Sort By Chart of Accounts

- CHIEF ASSESSOR
- DEP CHIEF ASSESSOR
- ASST ASSESS RES/COMM
- ASST ASSESS FIELDAPP
- PRINCIPAL OFF ASST
- OFFICE ASSISTANT - ASSESSOR
- ASSESSOR BOARD MEMBERS

	FY22 FTE	FY22 Salary
CHIEF ASSESSOR	1	128,021
DEP CHIEF ASSESSOR	1	106,992
ASST ASSESS RES/COMM	1	93,321
ASST ASSESS FIELDAPP	3.800	272,288
PRINCIPAL OFF ASST	1	56,130
OFFICE ASSISTANT - ASSESSOR	0.490	24,090
ASSESSOR BOARD MEMBERS	0	12,000
Total	8.290	692,842

Data filtered by ASSESSING, GENERAL FUND, ASSESSING and exported on February 11, 2021. Created with OpenGov

Finance - Treasury

Collapse All	FY20 Actual	FY21 Budget	FY22 Budget	2021-22 Variance	2021-22 Variance
▼ SALARIES	\$ 851,234	\$ 857,152	\$ 860,724	3,572	0.41%
(510101) PERMANENT FULL TIME	839,699	850,434	854,006	3,572	0.42%
(510143) WORKING OUT OF CLASS	214	0	0	0	0.00%
(510300) OVERTIME PAY	328	468	468	0	0.00%
(513044) LONGEVITY PAY	4,050	4,050	4,050	0	0.00%
(515059) A DAY BUYOUT	4,193	0	0	0	0.00%
(515501) CLOTHING-UNIFORM ALLOWANCE	2,750	2,200	2,200	0	0.00%
▼ SERVICES	321,055	326,220	328,935	2,715	0.83%
(522010) OFFICE EQUIP R & M	423	1,200	1,200	0	0.00%
(522016) COMPUTER SOFTWARE R & M	48,774	74,500	77,215	2,715	3.52%
(523011) COPY EQUIP RENTAL/LEASES	4,340	11,700	11,700	0	0.00%
(523012) PHOTOCOPY SERVICE CONTRAC	0	1,000	1,000	0	0.00%
(523071) OTHER EQUIPMENT RENTAL/LEASE	5,388	0	0	0	0.00%
(524002) OFFICE/CLERICAL SERVICES	3,670	5,500	5,500	0	0.00%
(524008) GENERAL CONSULT SERVICES	0	11,500	11,500	0	0.00%
(525002) WIRELESS COMMUNICATIONS	132	0	0	0	0.00%
(525022) POSTAGE	211	500	500	0	0.00%
(525030) PRINTING SERVICES	0	500	500	0	0.00%
(525060) ADVERTISING SERVICES	0	500	500	0	0.00%
(528005) CREDIT CARD SERVICE CHARGES	192,384	144,320	144,320	0	0.00%
(528010) BANKING SERVICES	54,849	49,500	49,500	0	0.00%
(528015) TAX TITLE COSTS	10,684	25,000	25,000	0	0.00%
(528080) SUBSCRIPTIONS	200	500	500	0	0.00%
▼ SUPPLIES	11,498	15,000	15,000	0	0.00%
(531012) OFFICE SUPPLIES	11,498	15,000	15,000	0	0.00%
▼ OTHER	9,364	8,300	8,300	0	0.00%
(551099) EDUCATION/TRAINING/CONFERENCES	4,454	5,000	5,000	0	0.00%
(553010) PROFESSIONAL DUES/MEMBERS	2,130	1,400	1,400	0	0.00%
(554030) FIDELITY INSURANCE	1,779	0	0	0	0.00%
(558001) CASH OVER-SHORT	1,001	1,900	1,900	0	0.00%
▼ BUDGETED CAPITAL	2,445	2,600	2,600	0	0.00%
(5A0017) LEASED COMPUTER EQUIPMENT	2,445	2,600	2,600	0	0.00%
Total	\$ 1,195,597	\$ 1,209,272	\$ 1,215,559	6,287	0.52%

Data filtered by EXPENSES, TREASURER-COLLECTOR and exported on February 11, 2021. Created with OpenGov

Administration

Expand All	FY20 Actual	FY21 Budget	FY22 Budget	2021-22 Variance	2021-22 Variance
► SALARIES	\$ 151,353	\$ 149,953	\$ 149,970	17	0.01%
► SERVICES	297,642	298,820	298,820	0	0.00%
► SUPPLIES	5,930	10,000	10,000	0	0.00%
► OTHER	2,963	6,100	6,100	0	0.00%
► BUDGETED CAPITAL	1,375	2,600	2,600	0	0.00%
Total	\$ 459,263	\$ 467,473	\$ 467,490	17	0.00%

Data filtered by EXPENSES, TREASURER-COLLECTOR and exported on February 11, 2021. Created with OpenGov

Collector

Expand All	FY20 Actual	FY21 Budget	FY22 Budget	2021-22 Variance	2021-22 Variance
► SALARIES	\$ 229,851	\$ 236,252	\$ 234,240	-2,012	-0.86%
► SERVICES	10,787	25,000	25,000	0	0.00%
► OTHER	252	0	0	0	0.00%
Total	\$ 240,890	\$ 261,252	\$ 259,240	-2,012	-0.78%

Data filtered by EXPENSES, TREASURER-COLLECTOR and exported on February 11, 2021. Created with OpenGov

Payroll

Expand All	FY20 Actual	FY21 Budget	FY22 Budget	2021-22 Variance	2021-22 Variance
▸ SALARIES	\$ 353,296	\$ 352,467	\$ 356,651	4,184	1.17%
▸ SERVICES	33,994	52,400	55,115	2,715	4.93%
▸ SUPPLIES	5,568	5,000	5,000	0	0.00%
▸ OTHER	4,622	2,200	2,200	0	0.00%
▸ BUDGETED CAPITAL	1,071	0	0	0	0.00%
Total	\$ 398,551	\$ 412,067	\$ 418,966	6,899	1.65%

Data filtered by EXPENSES, TREASURER-COLLECTOR and exported on February 11, 2021. Created with OpenGov

Treasurer

Expand All	FY20 Actual	FY21 Budget	FY22 Budget	2021-22 Variance	2021-22 Variance
▸ SALARIES	\$ 116,734	\$ 118,481	\$ 119,863	1,382	1.15%
▸ SERVICES	10,684	25,000	25,000	0	0.00%
▸ OTHER	1,527	0	0	0	0.00%
Total	\$ 128,945	\$ 143,481	\$ 144,863	1,382	0.95%

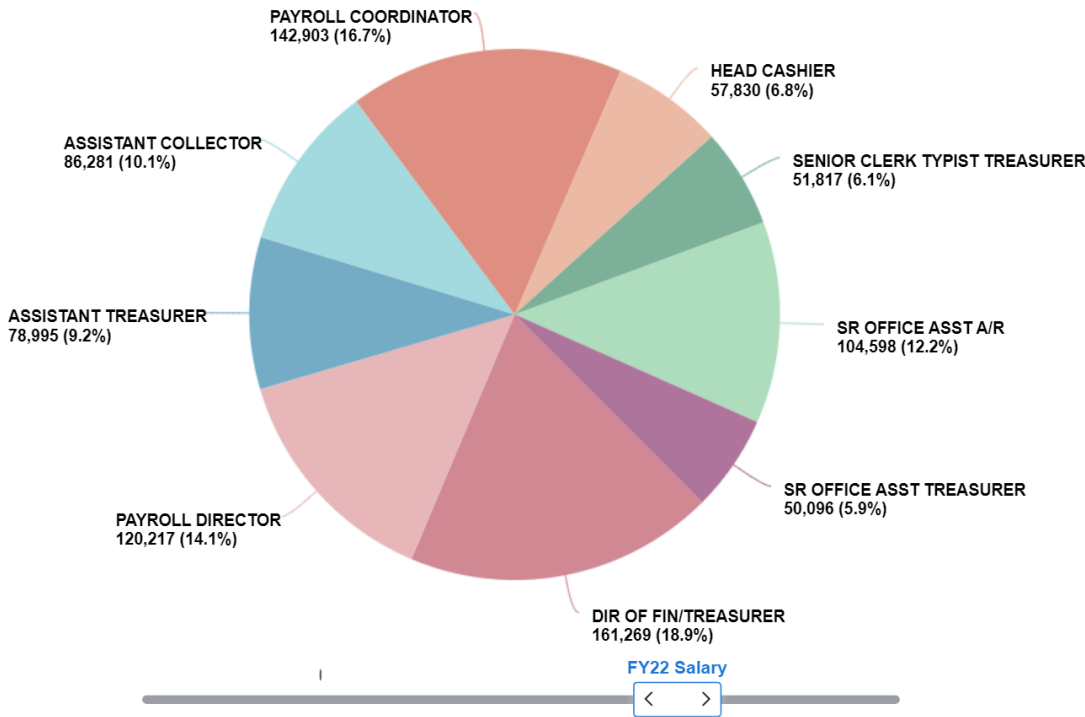
Data filtered by EXPENSES, TREASURER-COLLECTOR and exported on February 11, 2021. Created with OpenGov

Salaries

FY22 FTE Salary

Used for Sect. IV Departmental budgets IBB

Visualization



Sort By Chart of Accounts

•

 DIR OF FIN/TREASURER

•

 PAYROLL DIRECTOR

•

 ASSISTANT TREASURER

•

 ASSISTANT COLLECTOR

•

 PAYROLL COORDINATOR

•

 HEAD CASHIER

•

 SENIOR CLERK TYPIST TREASURER

•

 SR OFFICE ASST A/R

•

 SR OFFICE ASST TREASURER

	FY22 FTE	FY22 Salary
DIR OF FIN/TREASURER	1	161,269
PAYROLL DIRECTOR	1	120,217
ASSISTANT TREASURER	1	78,995
ASSISTANT COLLECTOR	1	86,281
PAYROLL COORDINATOR	2	142,903
HEAD CASHIER	1	57,830
SENIOR CLERK TYPIST TREASURER	1	51,817
SR OFFICE ASST A/R	2	104,598
SR OFFICE ASST TREASURER	1	50,096
Total	11	854,006

Data filtered by TREASURER, GENERAL FUND, TREASURER-COLLECTOR and exported on February 11, 2021. Created with OpenGov

PERFORMANCE / WORKLOAD INDICATORS

	ACTUAL FY2019	ESTIMATE FY2020	ACTUAL FY2020	ESTIMATE FY2021	ESTIMATE FY2022
COMPTROLLER					
Payment Vouchers/ Invoices Processed	39,731	45,000	37,751	43,000	40,000
EFT Payments Processed	1,718	2,000	1,602	1,900	1,800
Manual checks processed	0	1	0	0	0
Computer Checks Processed	14,057	15,000	12,352	15,000	14,000
Vendors Serviced	5,182	4,600	4,811	4,800	4,800
Journal Vouchers Processed	1,821	1,900	1,807	1,900	1,900
Requisitions Approved	9,106	10,000	8,496	10,000	10,000
Cash Receipts Processed	25,710	27,000	22,487	27,000	23,000
Miscellaneous Committed Bills Created	4,439	4,300	3,905	4,300	4,000

PERFORMANCE / WORKLOAD INDICATORS

	ACTUAL FY2019	ACTUAL FY2020	ACTUAL FY2021	ESTIMATE FY2022
PURCHASING				
Blanket Contracts	89	85	90	80
Public Bids	77	75	80	70
Purchase Orders (PO's)	9,132	8,496	3,462	8,500
PO \$ Value (millions)	\$243.50*	\$64.40*	\$38.40	\$70.00

(*) Adjusted in FY20
Large payments are
being direct paid

Reduced due
to Covid

PERFORMANCE / WORKLOAD INDICATORS

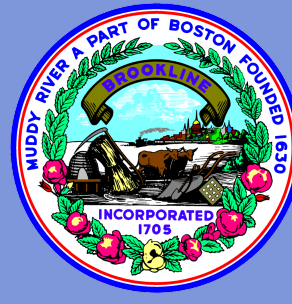
	FY2018 ACTUAL	FY2019 ACTUAL	FY2020 ACTUAL	FY2021 ESTIMATE	FY2022 ESTIMATE
ASSESSORS					
Revaluation/ DOR Certification Cycle Update		Revaluation	Update	Update	Update
Property Inspections Completed	3,320	3,122	1,932	2,500	2,500
Building Permits Reviewed	1,985	2,147	1,810	2,000	2,000
Property Sales Reviewed & Validated	705	773	643	700	700
Property Transfers (Deeds) Reviewed	1,105	1,175	1,152	1,200	1,200
Income & Expense Statements Reviewed	308	323	296	300	300
Personal Property Returns Reviewed	419	410	397	383	400
Exempt Property Returns Reviewed (3ABC)	93	97	81	100	100
Residential Exemption Audits Completed	236	315	340	350	350
Statutory (Personal) Exemptions Granted	106	110	103	100	100
Abatement Applications Received/Reviewed	141	235	200	200	200
Appellate Tax Board Petitions Filed/Reviewed	51	83	73	75	75
Motor Vehicle Excise Bills Committed	33,643	31,499	32,926	33,000	33,000
MVE Bills Abated	1,518	1,630	1,280	1,500	1,500

PERFORMANCE / WORKLOAD INDICATORS

	ACTUAL FY2019	ESTIMATE FY2020	ACTUAL FY2020	ESTIMATE FY2021	ESTIMATE FY2022
TREASURER / COLLECTOR					
Current Year Collections:					
Real Estate Tax	99.45%	99.00%	98.23%	98.00%	98.00%
Personal Property Tax	87.67%	90.00%	86.39%	87.00%	87.00%
Motor Vehicle Excise Tax	94.34%	95.00%	89.95%	90.00%	90.00%
Refuse	96.22%	99.00%	95.50%	96.00%	96.00%
Water	92.47%	95.00%	90.03%	93.00%	93.00%
Method of Payment:					
Checks	73.53%	75.00%	67.68%	66.00%	65.00%
Electronic Funds Transfer	21.57%	20.00%	26.73%	27.50%	28.00%
Credit Card	3.61%	3.50%	3.93%	4.00%	4.00%
Telephone/Mobile/Text (CC & EFT)	1.13%	1.50%	1.66%	2.50%	3.00%
Municipal Lien Certificates (MLC) Issued	1,956	1,200	1,760	1,600	1,500
Investment Earnings:					
Total \$	\$1,317,178	\$500,000	\$1,153,616	\$345,000	\$345,000
Investment Return	5.0%	3.5%	5.0%	2.0%	2.0%
Total Payrolls	119	120	110	120	120
Total # of Checks	3,528	3,500	2,414	2,400	2,400
Total # of Direct Deposits	92,624	93,000	91,143	92,000	92,000
W-2's Prepared Annually	4,026	4,000	4,025	4,000	4,000
% of Employees on Direct Deposit	99%	99%	99%	99%	99%

Town of Brookline FY22 Program Budget

Administration and Finance | Human Resources



Program Description

Brookline's Human Resources (HR) Department is at the **HeaRt** of the Town's provision of services to Brookline residents, businesses and visitors. Human Resources staff interacts with every School and Town employee, whether temporary or permanent, throughout their time with the Town and even afterwards. Our small staff of seven dedicated professionals assist employees and department leaders and managers on issues ranging from recruiting, onboarding and benefits, to discipline, supervision and coaching, to disability and leave management, and offboarding and retirement.

HR is moving from the transactional to the transformational - through a focus on making Brookline a destination employer as a respectful workplace for all employees as well as a place that provides training and development across the technical, legal and interpersonal areas - in order to improve employees' knowledge and skills, and advance on the provision of services. Now fully staffed for the first time in three years, HR will be looking at how we can support the Town departments and employees to achieve those goals.

HR: By The By-Laws: The goals of the Human Resources Department, as defined by the Town's Human Resources By-Law (Section 3.15) of the Town's General By-Laws, are to develop and administer fair and equitable human resources policies for the Town and its employees and to provide a system of human resources administration that is uniform, fair, efficient, and represents the mutual interest of the Town and employees of the Town.

The Department is responsible for assisting all town departments with the recruitment and selection of new employees, while ensuring compliance with all applicable federal, state, and local laws that govern this process. It develops and distributes policies regarding a number of different employment issues, including the Town's Sexual Harassment Policy. The Department also maintains a classification and compensation system for all positions; provides training to Department Heads and employees on important employment issues; negotiates and administers labor contracts; administers group health and life insurance, worker's compensation, public safety injured on duty, and unemployment compensation; administers the CDL Alcohol and Drug Testing Program; and monitors and administers employee leave, other human resources programs and benefits, and any other function assigned by the Town Administrator.

FY22 Objectives

1. As with FY21, Human Resources work will significantly revolve around the operational and fiscal impacts of COVID-19 and social justice issues.
2. Work From Home (WFH): Work with departments to identify positions with WFH capacity, work and oversight procedures. Facilitate policy integration across Town departments and unions.
3. Re-Imagine and Reform Policing: Assist with implementation of initiatives, policies and procedures related to the work of the groups affecting human resources, as directed by the Select Board and/or Town Meeting.
4. CDICR Citizen Complaint Working Group: Continue collaborating with Working Group on updated complaint process that respects employee rights as well as responsibilities to the community.
5. Racial Equity Group: Continue working with racial equity consultant on operationalizing use of a racial equity lens across all departments and Town organizations.
6. Community Engagement Agenda: Work with the CDICR's Community Engagement Committee to identify and implement human resource-related community engagement initiatives.
7. Collective Bargaining: In collaboration with the Labor Assistant Town Counsel, work on successor agreements for collective bargaining units. Continue to forge productive, cooperative relationships with Town unions, including continued participation in the Firefighter Local 950 Human Relations Committee.
8. Policy & Procedure Review: Continue our self-audit work to review and revise human resources policies, processes and functions, including the prioritization of policies and the creation of a review timeline. Continue to assess best practices regarding Social Media and Drug Free Workplace Policies as regulations develop and technology continues to evolve.
9. Compliance and Other Training: Develop effective training and development tools utilizing the new training platforms for training, tracking and management.
10. Recruiting: Continue to work with the Office of Diversity, Inclusion and Community Relations to develop a strategic plan to increase town-wide diversity and inclusion efforts in areas of recruitment, hiring, management and governance practices, including additional anti-discrimination training, diversity job fairs, collaboration with other towns and cities and an expansion of our recruitment networks to professional affinity groups.

FY21 Accomplishments

1. As with other departments, the strategic plans and operations of the Human Resources Office changed significantly due to the COVID pandemic, resulting budget impacts and the renewed focus on racial justice in light of Black Lives Matter. In particular, FY21 served to move our work in Human Resources on the "human" part of our workforce through supports for employees and their families. Throughout COVID, Town of Brookline was never closed, but moved to

remote operations where possible, and re-opened buildings to in person public interactions when protocols were in place to keep everyone safe.

2. COVID and the workplace: Facilitated remote work and supervision by providing guidance to departments on best practices for remote management and to employees on work-life balance from home. Examples include: Stress management/mindfulness, review and update of processes to reflect remote work, implementation of remote management practices, question and answer sessions.
3. Face Covering & Sanitation Protocols: In conjunction with Brookline Public Health, issued protocols for employees who need to report for work to stay safe and keep others safe, including: self-certifications and check in procedures, face coverings, social distancing, and “Call Ahead” visits to other departments.
4. Re-Opening Services: While much of the public facing services were shuttered due to COVID, HR worked with all departments to put in place staff, policies, and procedures to open safely. Implementation of Re-Opening included: a concierge at a new “Front Desk” at Town Hall, installing a web-based appointment system for necessary in-person appointments, regular meetings for departments to check-in on issues related to re-opening, and meeting the changing state requirements.
5. Re-Imagine and Reform Policing Groups: Provided subject matter expertise to the two groups and their subcommittees around human resource impacts related to issues and initiatives under review.
6. Committee on Diversity Inclusion and Community Relations (CDICR) Citizen Complaint Working Group: As a result of a Warrant article at the Spring 2020 Town Meeting, a revised process for the review of citizen complaints was proposed. HR is working collaboratively to assist the Working Group in the development of a new model for complaint review.
7. Racial Equity Group Implementation: Work with ODICR to implement the work of the Town’s consultant to identify, develop, implement, and champion racial equity practices throughout the Town.
8. Collective Bargaining: The Town’s bargaining team negotiated a one-year agreement with the Brookline Police Union to formalize adoption of GPS, and begin the process of negotiating the implementation of body worn cameras and dash cameras. As all other Town collective bargaining agreements end on June 30, 2021, initial discussions have begun with other collective bargaining units.
9. Human Resources-Labor Meetings: With the hiring of an Assistant Town Counsel focusing on Labor Relations, new weekly meetings promote the review and resolution of issues including both the human resources and labor/legal perspectives.
10. Local 950 Human Relations Committee: Firefighters Local 950 has initiated a Human Relations Committee to discuss and address various employee issues affecting its members. Human Resources staff serves to collaborate with the Committee to address issues not specifically related to collective bargaining, but quality of life issues.

FY22 Budget Line Item Report

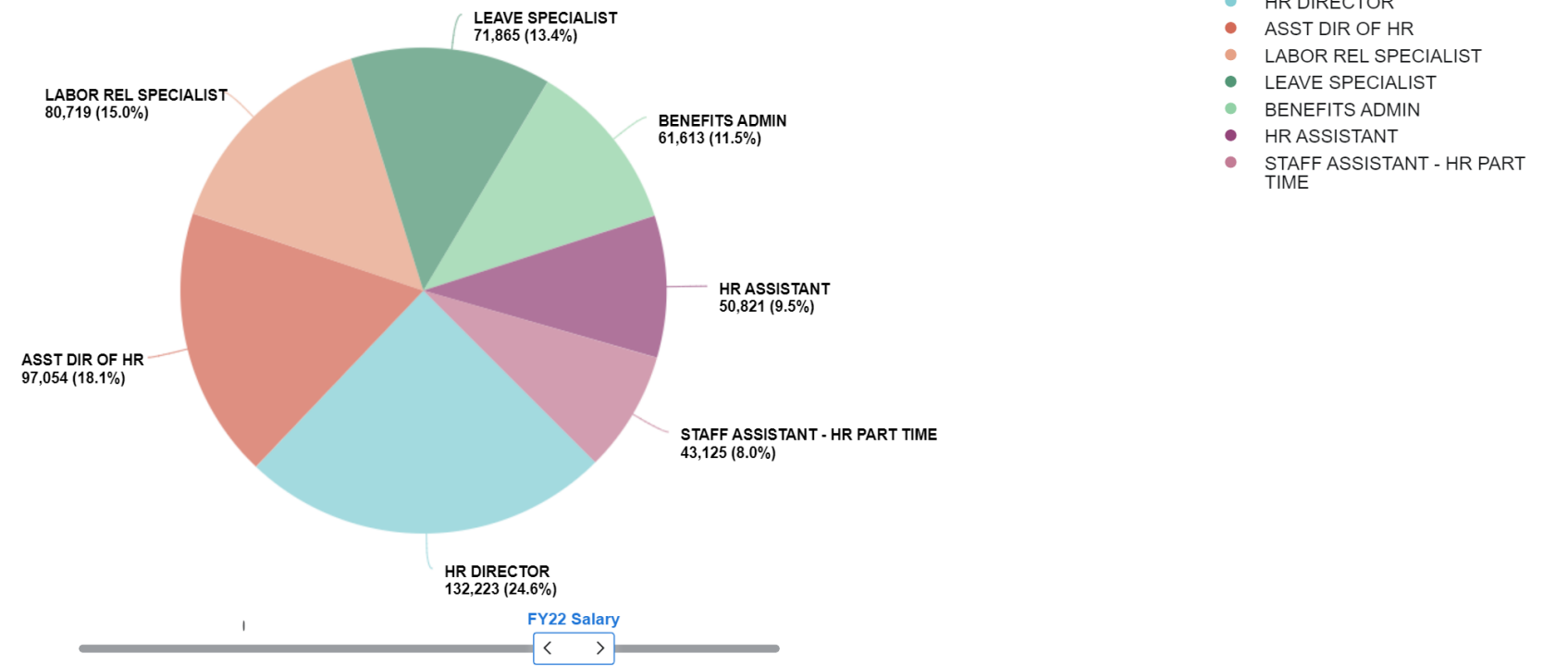
Collapse All	FY20 Actual	FY21 Budget	FY22 Budget	2021-22 Variance	2021-22 Variance
▼ SALARIES	\$ 278,499	\$ 319,843	\$ 321,796	1,953	0.61%
(510101) PERMANENT FULL TIME	257,421	419,940	494,294	74,354	15.04%
(510102) PERMANENT PART TIME	0	43,125	43,125	0	0.00%
(510201) TEMPORARY FULL TIME	11,305	0	0	0	0.00%
(510901) PART TIME TEMPORARY SAL	4,759	0	0	0	0.00%
(513044) LONGEVITY PAY	1,250	1,250	1,250	0	0.00%
(514510) SICK PAY BUYOUT	585	0	0	0	0.00%
(515058) VACATION BUYOUT	407	0	0	0	0.00%
(515059) A DAY BUYOUT	2,773	0	0	0	0.00%
(515501) CLOTHING-UNIFORM ALLOWANCE	0	550	550	0	0.00%
(OFFSETS) OFFSET	0	-145,022	-217,423	-72,401	-33.30%
▼ SERVICES	169,074	239,359	239,359	0	0.00%
(522010) OFFICE EQUIP R & M	380	500	500	0	0.00%
(523010) OFFICE EQUIP RENTALS/LEAS	2,340	2,159	2,159	0	0.00%
(524010) PROFESSIONAL/TECH SERVICE	12,167	22,500	22,500	0	0.00%
(524020) LEGAL SERVICES	104,596	157,500	157,500	0	0.00%
(524027) CDL DRUG TESTING	3,870	6,000	6,000	0	0.00%
(524028) PREPLACEMENT-MEDICAL	35,164	35,700	35,700	0	0.00%
(525002) WIRELESS COMMUNICATIONS	550	700	700	0	0.00%
(525022) POSTAGE	170	200	200	0	0.00%
(525050) DELIVERY SERVICES	18	400	400	0	0.00%
(525060) ADVERTISING SERVICES	9,600	13,300	13,300	0	0.00%
(528080) SUBSCRIPTIONS	219	400	400	0	0.00%
▼ SUPPLIES	4,671	14,900	14,900	0	0.00%
(531012) OFFICE SUPPLIES	1,475	3,700	3,700	0	0.00%
(531018) DATA PROCESSING SOFTWARE	3,098	11,200	11,200	0	0.00%
(533210) MEALS & RECEPTIONS	98	0	0	0	0.00%
▼ OTHER	5,955	26,500	26,500	0	0.00%
(551099) EDUCATION/TRAINING/CONFERENCES	5,630	25,500	25,500	0	0.00%
(553010) PROFESSIONAL DUES/MEMBERS	325	1,000	1,000	0	0.00%
▼ BUDGETED CAPITAL	1,236	1,640	1,640	0	0.00%
(5A0017) LEASED COMPUTER EQUIPMENT	1,236	1,640	1,640	0	0.00%
Total	\$ 459,435	\$ 602,242	\$ 604,195	1,953	0.32%

Data filtered by EXPENSES, HUMAN RESOURCES and exported on February 11, 2021. Created with OpenGov

FY22 FTE Salary

Used for Sect. IV Departmental budgets IBB

Visualization



	FY22 FTE	FY22 Salary
HR DIRECTOR	1	132,223
ASST DIR OF HR	1	97,054
LABOR REL SPECIALIST	1	80,719
LEAVE SPECIALIST	1	71,865
BENEFITS ADMIN	1	61,613
HR ASSISTANT	1	50,821
STAFF ASSISTANT - HR PART TIME	0.780	43,125
Total	6.780	537,420

Data filtered by HUMAN RESOURCES, GENERAL FUND, HUMAN RESOURCES and exported on February 12, 2021. Created with OpenGov

PERFORMANCE / WORKLOAD INDICATORS

	ACTUAL FY2018	ESTIMATE FY2019	ACTUAL FY2019	ESTIMATE FY2020	ACTUAL FY2020	ESTIMATE FY2021	ESTIMATE FY2022
Workers' Comp. Costs	\$1,977,422	\$1,900,000	\$1,559,520	\$1,900,000	\$1,722,275	\$1,900,000	\$1,900,000
Town	\$1,765,103	\$1,465,000	\$952,197	\$950,000	\$1,512,195	\$950,000	\$950,000
School	\$212,319	\$85,000	\$107,045	\$100,000	\$210,080	\$100,000	\$100,000
Job injuries (WC/Police & Fire)	117/31	117/31	89/45	89/45	104/41	89/45	89/45
Time Lost/No Time Lost (WC/Pol& Fir)	41/76 - 20/11	41/76 - 20/11	34/55 - 22/23	34/55 - 22/23	27/15 - 36/26	34/55 - 22/23	34/55 - 22/23
Management Training Programs	11	12	17	20	8	20	20
Employee Training Programs	27	27	79	80	87	80	87
Immunization Clinics/# of Employees	4/236	4/236	4/256	0	0	0	0
Sick Leave Hours/Permanent Employees	54,279	54,000	65,246	65,000	56,838	65,000	57,000
Unemployment Claims							
Paid/Processed	43/98	43/98	46/103	43/98	*	35/76	*
Town	18/42	18/42	21/47	18/42	*	15/16	*
School	25/56	25/56	25/56	25/56	*	28/64	*
Unemployment Costs	\$132,608	\$130,000	\$245,403	\$245,000	\$476,844	\$245,000	\$400,000
Town	\$55,695	\$54,600	\$139,803	\$140,000	\$233,114	\$140,000	\$200,000
School	\$76,913	\$75,400	\$104,477	\$105,000	\$243,730	\$105,000	\$200,000
Job Appl. Processed	3,879	3,800	4,315	4,500	5,574	4,500	5,500
CORI/SORI Checks	1,670	1,700	1,318	1,300	1,584	1,300	1,500

*Due to the national pandemic and unprecedented demand for unemployment, claims are delayed or still processing.

PERFORMANCE / WORKLOAD INDICATORS (CON'T.)

	ACTUAL FY2018	ESTIMATE FY2019	ACTUAL FY2019	ESTIMATE FY2020	ACTUAL FY2020	ESTIMATE FY2021	ESTIMATE FY2022
Group Health Contracts	17	17	18	18	18	18	18
Group Health Changes	2,650	2,500	0	0	0	0	0
Group Health Subscribers	3,133	3,150	3,270	3,270	3,225	3,270	3,225
GIC-offered PPO Plans	245	230	276	276	272	276	272
% of Total	7.8%	7.3%	8.4%	8.4%	8.4%	8.4%	8.4%
GIC-offered POS Plans	999	980	968	968	952	968	952
% of Total	31.9%	31.1%	29.6%	29.6%	29.5%	29.6%	29.5%
GIC-offered HMO Plans	543	550	640	640	639	640	639
% of Total	17.3%	17.1%	19.6%	19.6%	19.8%	19.6%	19.8%
GIC-offered Indemnity Plans	41	32	32	32	34	32	34
% of Total	1.3%	1.0%	1.0%	1.0%	1.1%	1.0%	1.1%
Medicare Supplement Plans	1,301	1,305	1,349	1,349	1,332	1,349	1,332
% of Total	41.5%	41.4%	41.3%	41.3%	41.3%	41.3%	41.3%
Active	1,553	1,576	1,632	1,632	1,609	1,632	1,609
% of Total	49.6%	50.0%	49.9%	49.9%	49.9%	49.9%	49.9%
Retiree	1,580	1,574	1,638	1,638	1,616	1,638	1,616
% of Total	50.4%	50.0%	50.1%	50.1%	50.1%	50.1%	50.1%
Individual	2,213	2,218	2,356	2,356	2,325	2,356	2,325
% of Total	70.6%	70.4%	72.0%	72.0%	72.1%	72.0%	72.1%
Family	920	932	914	914	900	914	900
% of Total	29.4%	29.6%	28.0%	28.0%	27.9%	28.0%	27.9%
Town	1,372	1,365	1,845	1,845	1,546	1,845	1,546
% of Total	43.8%	43.3%	56.4%	56.4%	47.9%	56.4%	47.9%
School	1,761	1,785	1,425	1,425	1,679	1,425	1,679
% of Total	56.2%	56.7%	43.6%	43.6%	52.1%	43.6%	52.1%

PERFORMANCE / WORKLOAD INDICATORS (CON'T.)

	ACTUAL FY2018	ESTIMATE FY2019	ACTUAL FY2019	ESTIMATE FY2020	ACTUAL FY2020	ESTIMATE FY2021	ESTIMATE FY2022
Group Life Subscribers	2,307	2,375	2,362	2,362	2,320	2,362	2,320
Active	1,420	1,420	1,369	1,369	1,634	1,369	1,634
% of Total	61.5%	59.7%	58.0%	58.0%	70.4%	58.0%	70.4%
Retiree	887	955	993	993	956	993	956
% of Total	38.5%	40.3%	42.0%	42.0%	41.2%	42.0%	41.2%
Town	1,068	1,100	1,210	1,210	1,283	1,210	1,283
% of Total	46.3%	46.3%	51.2%	51.2%	55.3%	51.2%	55.3%
School	1,239	1,275	1,152	1,152	1,037	1,152	1,037
% of Total	53.7%	53.7%	48.8%	48.8%	44.7%	48.8%	44.7%
No. of Death Benefits Paid	26	28	31	31	34	31	34
Voluntary Addl. Life Subscribers	223	225	331	331	347	331	347
Voluntary Addl. Life Changes	150	150	0	0		0	
Voluntary Dental Contracts	2	2	2	2	2	2	2
Voluntary Dental Changes	630	625	0	0	0	0	0
Voluntary Dental Subscribers	1,321	1,220	1,583	1,583	1,549	1,583	1,549
Individual	722	650	853	853	864	853	864
Family	450	470	503	503	467	503	467
Individual +1	149	100	227	227	218	227	218
Town	475	440	558	558	566	558	566
School	846	780	1,025	1,025	983	1,025	983
Retiree Dental Subscribers	407	420	476	476	484	476	484
Individual	244	250	278	278	287	278	287
Family	163	170	198	198	197	198	197
Long Term Disability (LTD)	30	30	120	120	118	120	118
LTD Changes	30	30	0	0		0	
Colonial STDI, AI, CI	N/A	N/A	159	200	189	200	189

management, and reporting requirements of the Brookline organization.

Network Support - is responsible for those functions related to implementing, maintaining, and supporting the connectivity between the organization's computers, telecom infrastructure, and systems software.

Customer Service - is responsible for those functions related to directly supporting users of IT systems and services.

FY22 Objectives

1. Continue digital transformation.
2. Maximize and fully implement all functional features of existing systems.
3. Migrate servers and upgrade financial system.
4. Implement Two-Factor Authentication.
5. Increase network throughput and redundancy.
6. Replace onsite virtualization, storage and backup infrastructure.
7. Plan for end-of-life network and server hardware replacements.
8. Implement next-generation networks, firewall and wireless technology.
9. Migrate from AWS to AWS GovCloud.
10. Implement hybrid cloud for disaster recovery.

FY21 Accomplishments

1. Provided steady, secure and timely support to all Town and Schools departments and services throughout the pandemic.
2. Provided timely support to remote workforce and learning.
3. Worked collaboratively with departments, rapidly transformed many services digitally.
4. Rapidly implemented video conferencing platforms in response to COVID and provided numerous training sessions to public meeting hosts and internal users.
5. Rapidly supplied devices to remote workforce.
6. Implemented new online permits and streamlined workflow, including the following:
7. Implemented Digital Signature.
8. Programmed ad hoc and on-demand online forms for VPN access and COVID Employee Self certification.
9. Supplied additional email and storage accounts to EMT and Health during COVID.
10. Assisted the rollout of Open Town Hall survey tool.

FY22 Budget Line Item Report

Collapse All	FY20 Actual	FY21 Budget	FY22 Budget	2021-22 Variance	2021-22 Variance
▼ SALARIES	\$ 1,205,260	\$ 1,215,249	\$ 1,242,973	27,724	2.23%
(510101) PERMANENT FULL TIME	1,162,652	1,207,549	1,236,023	28,474	2.30%
(513044) LONGEVITY PAY	7,750	7,150	6,400	-750	-11.72%
(514501) EXTRA COMPENSATION	350	0	0	0	0.00%
(515058) VACATION BUYOUT	18,822	0	0	0	0.00%
(515059) A DAY BUYOUT	15,136	0	0	0	0.00%
(515501) CLOTHING-UNIFORM ALLOWANCE	550	550	550	0	0.00%
▼ SERVICES	489,957	580,773	675,773	95,000	14.06%
(522015) D P EQUIP R & M	2,780	12,000	12,000	0	0.00%
(522016) COMPUTER SOFTWARE R & M	278,317	320,805	415,805	95,000	22.85%
(522019) EQUIPMENT SERVICE CONTRACT	0	3,000	3,000	0	0.00%
(523011) COPY EQUIP RENTAL/LEASES	1,788	2,431	2,431	0	0.00%
(523012) PHOTOCOPY SERVICE CONTRAC	0	620	620	0	0.00%
(523020) SOFTWARE LICENSES	47,334	0	0	0	0.00%
(524002) OFFICE/CLERICAL SERVICES	385	0	0	0	0.00%
(524008) GENERAL CONSULT SERVICES	26,022	40,000	40,000	0	0.00%
(524010) PROFESSIONAL/TECH SERVICE	7,335	5,000	5,000	0	0.00%
(524031) INTERNET RELATED SERVICES	3,925	2,000	2,000	0	0.00%
(525001) TELEPHONE & TELEGRAPH	113,613	191,917	191,917	0	0.00%
(525002) WIRELESS COMMUNICATIONS	8,225	3,000	3,000	0	0.00%
(528005) CREDIT CARD SERVICE CHARGES	233	0	0	0	0.00%
▼ SUPPLIES	8,392	10,350	10,350	0	0.00%
(531012) OFFICE SUPPLIES	4,237	350	350	0	0.00%
(531015) DATA PROCESSING SUPPLIES	4,155	5,000	5,000	0	0.00%
(531018) DATA PROCESSING SOFTWARE	0	5,000	5,000	0	0.00%
▼ OTHER	22,240	15,050	15,050	0	0.00%
(551020) IN STATE TRAVEL -OTHER	0	100	100	0	0.00%
(551099) EDUCATION/TRAINING/CONFERENCES	19,581	14,000	14,000	0	0.00%
(553010) PROFESSIONAL DUES/MEMBERS	2,659	950	950	0	0.00%
▼ BUDGETED CAPITAL	268,100	268,100	268,100	0	0.00%
(5A0005) DATA PROCESSING EQUIPMENT-BUD	13,972	13,000	13,000	0	0.00%
(5A0017) LEASED COMPUTER EQUIPMENT	12,711	5,100	5,100	0	0.00%
(5A0035) LEASED DATA STORAGE EQUIPMENT	41,417	50,000	50,000	0	0.00%
(5A0036) LEASED NETWORK EQ & SOFTWARE	200,000	200,000	200,000	0	0.00%
Total	\$ 1,993,949	\$ 2,089,522	\$ 2,212,246	122,724	5.55%

Data filtered by EXPENSES, INFORMATION TECHNOLOGY and exported on February 15, 2021. Created with OpenGov

Administration

Expand All	FY20 Actual	FY21 Budget	FY22 Budget	2021-22 Variance	2021-22 Variance
► SALARIES	\$ 200,993	\$ 222,450	\$ 228,034	5,584	2.45%
► SERVICES	489,957	580,773	675,773	95,000	14.06%
► SUPPLIES	8,392	10,350	10,350	0	0.00%
► OTHER	22,240	15,050	15,050	0	0.00%
► BUDGETED CAPITAL	264,545	268,100	268,100	0	0.00%
Total	\$ 986,127	\$ 1,096,723	\$ 1,197,307	100,584	8.40%

Data filtered by EXPENSES, INFORMATION TECHNOLOGY and exported on February 11, 2021. Created with OpenGov

Application Management

Expand All	FY20 Actual	FY21 Budget	FY22 Budget	2021-22 Variance	2021-22 Variance
► SALARIES	\$ 601,156	\$ 597,567	\$ 607,964	10,397	1.71%
► BUDGETED CAPITAL	3,555	0	0	0	0.00%
Total	\$ 604,711	\$ 597,567	\$ 607,964	10,397	1.71%

Data filtered by EXPENSES, INFORMATION TECHNOLOGY and exported on February 11, 2021. Created with OpenGov

Network Support

Expand All	FY20 Actual	FY21 Budget	FY22 Budget	2021-22 Variance	2021-22 Variance
► SALARIES	\$ 311,604	\$ 302,420	\$ 309,921	7,501	2.42%
Total	\$ 311,604	\$ 302,420	\$ 309,921	7,501	2.42%

Data filtered by EXPENSES, INFORMATION TECHNOLOGY and exported on February 11, 2021. Created with OpenGov

Customer Service

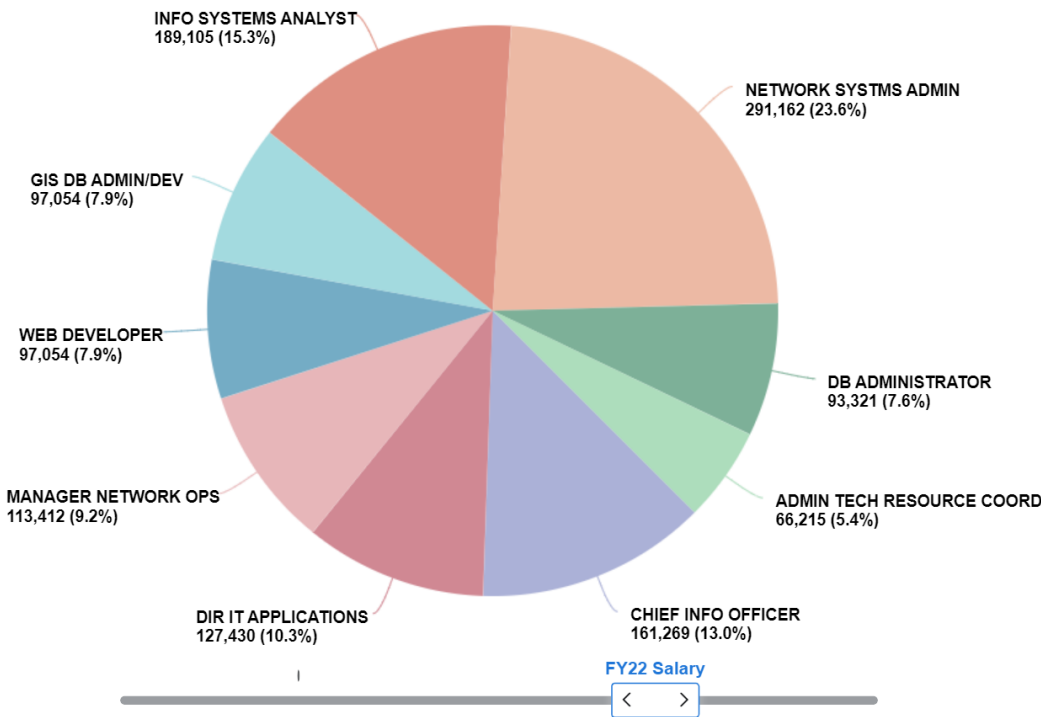
Expand All	FY20 Actual	FY21 Budget	FY22 Budget	2021-22 Variance	2021-22 Variance
► SALARIES	\$ 91,507	\$ 92,812	\$ 97,054	4,242	4.37%
Total	\$ 91,507	\$ 92,812	\$ 97,054	4,242	4.37%

Data filtered by EXPENSES, INFORMATION TECHNOLOGY and exported on February 11, 2021. Created with OpenGov

FY22 FTE Salary

Used for Sect. IV Departmental budgets IBB

Visualization



Sort By Chart of Accounts

- CHIEF INFO OFFICER
- DIR IT APPLICATIONS
- MANAGER NETWORK OPS
- WEB DEVELOPER
- GIS DB ADMIN/DEV
- INFO SYSTEMS ANALYST
- NETWORK SYSTMS ADMIN
- DB ADMINISTRATOR
- ADMIN TECH RESOURCE COORD

	FY22 FTE	FY22 Salary
CHIEF INFO OFFICER	1	161,269
DIR IT APPLICATIONS	1	127,430
MANAGER NETWORK OPS	1	113,412
WEB DEVELOPER	1	97,054
GIS DB ADMIN/DEV	1	97,054
INFO SYSTEMS ANALYST	2	189,105
NETWORK SYSTMS ADMIN	3	291,162
DB ADMINISTRATOR	1	93,321
ADMIN TECH RESOURCE COORD	1	66,215
Total	12	1,236,022

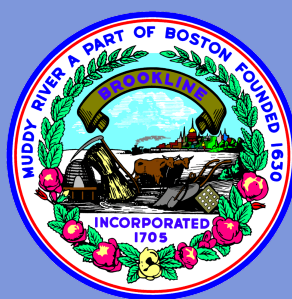
Data filtered by INFORMATION TECHNOLOGY, GENERAL FUND, INFORMATION TECHNOLOGY and exported on February 11, 2021. Created with OpenGov

PERFORMANCE / WORKLOAD INDICATORS

	ACTUAL FY2018	ACTUAL FY2019	ACTUAL FY2020	ESTIMATE FY2021	ESTIMATE FY2022
<u>Application Management</u>					
Enterprise Applications Maintained	20	18	53	57	58
Departmental Applications Maintained	13	22	44	48	48
BrooklineMA.gov Site Visits	649,805	677,479	748,228	1,140,926	1,000,000
BrooklineMA.gov Mobile site Visits	179,000	196,284	487,452	205,000	205,000
% Uptime	99.7%	99.7%	99.85%	99.9%	99.9%
Webpages Maintained	985	800	804	800	800
Brookline.k12.ma.us Site Visits	325,000	495,323	532,019	550,000	550,000
% Uptime	99.7%	99.9%	99.84%	99.9%	99.9%
Public List Servs Managed	112	81	94	100	100
# of Standard Maps Available	365	345	335	335	335
GIS Data Layers	374	374	486	489	489
<u>Network Operations</u>					
Network Connected Sites	42	43	44	45	47

Town of Brookline FY22 Program Budget

Administration and Finance I Select Board



Program Description

The Select Board is composed of five members who are elected for staggered three-year terms. As directors of the municipal corporation, they are vested with the general management of the Town. The Select Board initiate legislative policy by inserting articles in Town Meeting Warrants and then implement and enforce the votes subsequently adopted; establish town administrative policies; review and set fiscal guidelines for the annual Operating Budget and the six-year Capital Improvement Program (CIP); appoint department heads and members of many official boards and commissions; hold public hearings on important town issues and periodic conferences with agencies under their jurisdiction and with community groups; represent the Town before the State Legislature and in all regional and metropolitan affairs; and enforce Town by-laws and regulations. The Board also appoints the Town Administrator, who serves as the Chief Administrative Officer of the Town in accordance with the “Town Administrator Act” (Ch. 270 of the Acts of 1985, as amended).

The Select Board also serve as the licensing board responsible for issuing and renewing over 600 licenses in 20 categories, including common victualler, food vendor, liquor, lodging house, open-air parking lots, inflammables, and entertainment.

FY22 Objectives

Finance and Administration

1. To ensure the Town's budget allocates resources responsibly to ensure long-term financial sustainability while observing prudent financial practices to retain the Town's Aaa credit rating.
2. To continue to review and implement prudent and appropriate recommendations made by the Brookline Fiscal Advisory committee concerning Town and School budget principles and policies.
3. To use these Select Board objectives to provide direction to departments and improve performance indicators.
4. To review and update boards and commission applications and simplify the process to search and apply for openings.
5. To review and consider police policy recommendations made by the Task Force to Reimagine Police and the Select Board Committee on Policing Reforms.

Diversity and Community Engagement

6. To provide leadership and support to the Town Administrator, the Diversity, Inclusion and Community Relations Office, Boards and Commissions, Town Departments, and other community stakeholders in collaborative efforts to implement meaningful diversity and inclusion initiatives and continue the GARE evaluation process.

7. To implement diversity and inclusion efforts into the Town's services, planning, procurement, and hiring processes.

8. To review and collaborate with ODICR, the new Community Engagement Strategist, Town departments, and the public to assess, provide recommendations, and improve community engagement programming and processes.

9. To work with Town departments and a racial equity consultant to review and consider town equity reform recommendations.

10. To encourage Town staff to develop innovative programs and initiatives to increase Brookline's racial diversity through marketing and outreach programs and work with the CDICR to launch the Racial Equity and Advancement Fund.

Economic Development, Planning, and Regulation

11. To pursue re-codification and an update to the zoning by-laws that meets Town needs and objectives.

12. To continue to work with the Cannabis Mitigation Advisory Committee and the local Cannabis businesses to responsibly monitor and implement mitigation efforts regarding the impact of cannabis businesses within the Town.

13. To support the Community Preservation Act's adoption and commence its implementation if Brookline residents vote to adopt the CPA at the spring election.

14. To support the increase in the production of quality affordable senior, middle-income, and low-income housing. As well as to work towards achieving and exceeding the 10% goal on the subsidized housing inventory that would allow the Town to avoid the issuance of comprehensive permits that limit the Town's control over housing developments under Chapter 40B.

15. To develop and implement local rules and regulations in conjunction with State regulations associated with short-term property rentals.

Environmental Planning

16. To identify and pursue fossil-fuel-free opportunities for municipal buildings and support energy-efficient projects.

17. To encourage the use of different portfolio options for the Town via the Brookline Green Electricity community aggregation program and through our municipal electricity contract to achieve the goal of zero emissions by 2050.

18. To continue to encourage the utilization of electric and alternative vehicles throughout the Town via EV charging investments and partnerships.

19. To work with the new Assistant Director of Sustainability to ensure that the Town's sustainability goals and priorities are reviewed and incorporated in the Town's policies and municipal projects.

20. To continue to work with National Grid to ensure they undertake appropriate mitigation and restoration actions to address gas leaks within the Town.

FY21 Accomplishments

- 1. Retained a Aaa credit rating and was awarded the "Distinguished Budget Presentation Award" by the Government Finance Officers Association for the FY21 budget document.
- 2. Successfully acquired the property on the west side of the old Newbury College land.
- 3. Worked closely with all departments and the public to address and mitigate problems caused by the COVID-19 pandemic.
- 4. Reviewed the report produced by the Brookline Fiscal Advisory Committee and began the process to implement some of the recomendations.
- 5. Successfully implemented the conversion to remote public meetings to further facilitate and promote public engagement.

FY22 Budget Line Item Report

Collapse All	FY20 Actual	FY21 Budget	FY22 Budget	2021-22 Variance	2021-22 Variance
▼ SALARIES	\$ 717,099	\$ 789,746	\$ 798,827	9,081	1.14%
(510101) PERMANENT FULL TIME	674,524	740,746	749,827	9,081	1.21%
(510102) PERMANENT PART TIME	0	7,200	7,200	0	0.00%
(510201) TEMPORARY FULL TIME	100	0	0	0	0.00%
(510300) OVERTIME PAY	397	0	0	0	0.00%
(513044) LONGEVITY PAY	1,650	2,400	2,400	0	0.00%
(514045) STIPENDS	18,500	18,500	18,500	0	0.00%
(514501) EXTRA COMPENSATION	10,298	19,500	19,500	0	0.00%
(515059) A DAY BUYOUT	3,517	0	0	0	0.00%
(515501) CLOTHING-UNIFORM ALLOWANCE	550	1,100	1,100	0	0.00%
(515540) AUTO ALLOWANCE	7,563	7,500	7,500	0	0.00%
(OFFSETS) OFFSET	0	-7,200	-7,200	0	0.00%
▼ SERVICES	6,022	56,880	10,880	-46,000	-422.79%
(523011) COPY EQUIP RENTAL/LEASES	4,212	4,225	4,225	0	0.00%
(524002) OFFICE/CLERICAL SERVICES	315	0	0	0	0.00%
(524010) PROFESSIONAL/TECH SERVICE	0	50,000	4,000	-46,000	-1,150.00%
(525002) WIRELESS COMMUNICATIONS	1,414	1,730	1,730	0	0.00%
(525030) PRINTING SERVICES	0	500	500	0	0.00%
(525050) DELIVERY SERVICES	0	50	50	0	0.00%
(525060) ADVERTISING SERVICES	81	250	250	0	0.00%
(528080) SUBSCRIPTIONS	0	125	125	0	0.00%
▼ SUPPLIES	4,438	3,048	3,048	0	0.00%
(531012) OFFICE SUPPLIES	4,177	3,048	3,048	0	0.00%
(533210) MEALS & RECEPTIONS	261	0	0	0	0.00%
▼ OTHER	18,409	7,900	7,900	0	0.00%
(551001) AUTO REIMBURSEMENT	0	400	400	0	0.00%
(551099) EDUCATION/TRAINING/CONFERENCES	5,232	3,000	3,000	0	0.00%
(553010) PROFESSIONAL DUES/MEMBERS	13,177	4,500	4,500	0	0.00%
▼ BUDGETED CAPITAL	6,212	2,155	2,155	0	0.00%
(5A0006) OFFICE EQUIPMENT -BUD	4,206	0	0	0	0.00%
(5A0017) LEASED COMPUTER EQUIPMENT	2,006	2,155	2,155	0	0.00%
Total	\$ 752,179	\$ 859,729	\$ 822,810	-36,919	-4.49%

Data filtered by EXPENSES, SELECT BOARD and exported on February 11, 2021. Created with OpenGov

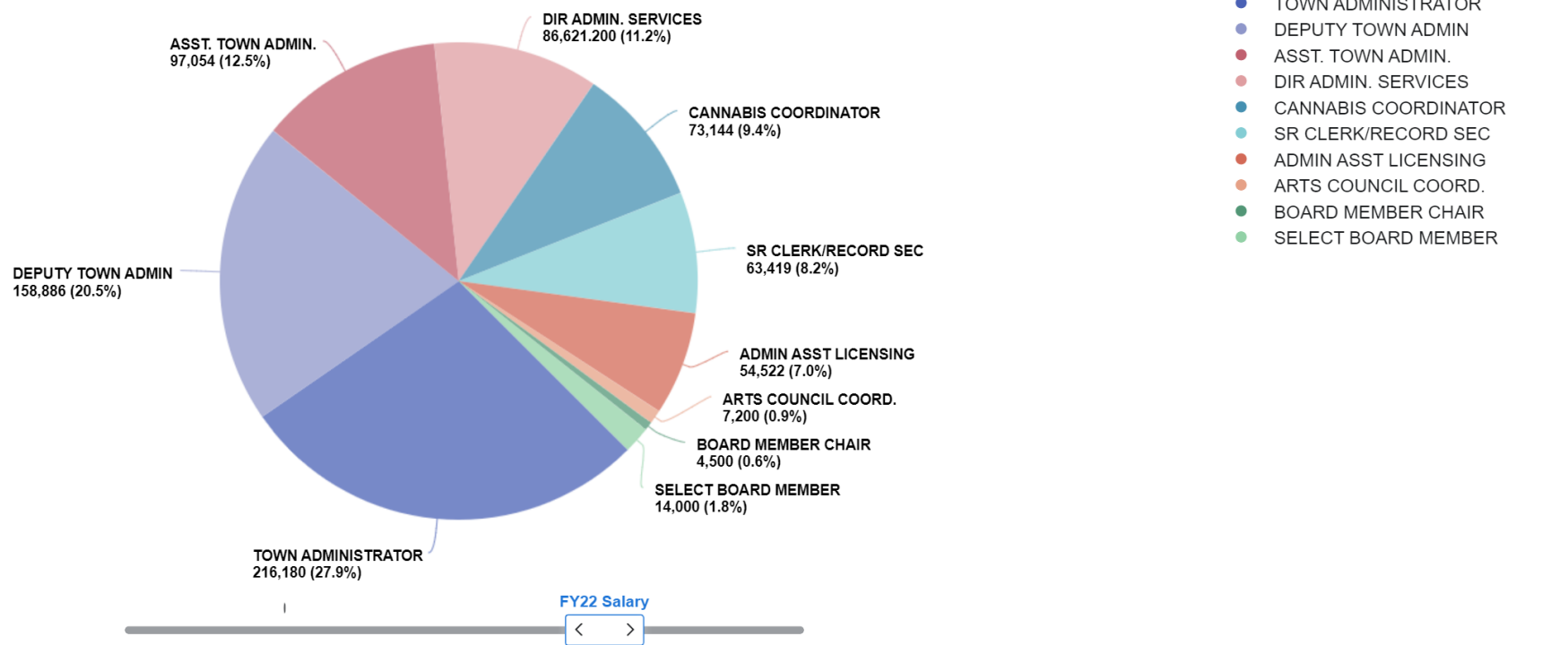
Expand All	FY20 Actual	FY21 Budget	FY22 Budget	2021-22 Variance	2021-22 Variance
► REVENUES	\$ 3,625,010	\$ 1,386,659	\$ 1,649,658	262,999	15.94%
Revenues Less Expenses	\$ 3,625,010	\$ 1,386,659	\$ 1,649,658	262,999	15.94%

Data filtered by Types, SELECT BOARD and exported on February 11, 2021. Created with OpenGov

FY22 FTE Salary

Used for Sect. IV Departmental budgets IBB

Visualization



	FY22 FTE	FY22 Salary
TOWN ADMINISTRATOR	1	216,180
DEPUTY TOWN ADMIN	1	158,886
ASST. TOWN ADMIN.	1	97,054
DIR ADMIN. SERVICES	1	86,621,200
CANNABIS COORDINATOR	1	73,144
SR CLERK/RECORD SEC	1	63,419
ADMIN ASST LICENSING	1	54,522
ARTS COUNCIL COORD.	0	7,200
BOARD MEMBER CHAIR	0	4,500
SELECT BOARD MEMBER	0	14,000
Total	7	775,526.200

Data filtered by SELECT BOARD, GENERAL FUND, SELECT BOARD and exported on February 11, 2021. Created with OpenGov

PERFORMANCE / WORKLOAD INDICATORS

	ACTUAL	ESTIMATE	ACTUAL	ESTIMATE	ESTIMATE
	FY2019	FY2020	FY2020	FY2021	FY2022
Brookline's Credit Rating	Aaa	Aaa	Aaa	Aaa	Aaa
# of Aaa's in Mass *	14	14	14	15	16
Tax Levy Per Capita	\$3,575	\$3,792	\$3,797	\$4,325	\$4,585
Management					
Appointments	2	2	2	2	2
Licenses Issued #	642	700	480	500	600
% of renewal licenses					
paid online	5%	5%	5%	5%	10%

* Aaa's rated by Moody's

#No temporary licenses due to COVID



Prepared by the Town of Brookline

Department of Planning and Community Development

February 2021

FOSSIL-FUEL-FREE INCENTIVES STUDY

Acknowledgments

This report was prepared with the participation of the following Town of Brookline departments:

Planning Department
Building Department
Legal Department

In addition, informative interviews were had with the following individuals:

Daniel Adelson, ADCO Realty
Robert Basile, The Basile Group
Lauren Baumann, LEED AP, CPHC, New Ecology
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Edward Connelly, LEED AP, New Ecology
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Marc Levin, Chestnut Hill Realty
Bruce Percelay, Mount Vernon Company
Chris Schaffner, P.E., LEED Fellow, The Green Engineer
Victor Sheen, AURA Properties
Tommy Vitolo, State Representative

CONTENTS

- I. Executive Summary – page 4
 - Key findings
 - Recommended Next Steps

- II. Introduction and Background – page 8
 - Scope of Study and Methodology
 - Charge
 - Timing and associated limitations
 - Methodology
 - Selected Local and State Building Energy and Emissions Policies
 - Warrant Article 21
 - Petitioners’ Proposed Warrant Article
 - Definitions

- III. Ongoing and Planned Land Use Studies and Synergy with Electrification Strategies – page 22
 - Synergizing Town Policy Goals Through Land Use Studies and Overlay Districts
 - Studies with High Potential for Electrification Strategies
 - Multifamily Study
 - Parking Demand Study
 - Lower Boylston and Upper Boylston Studies
 - Studies with Low Potential for Electrification Strategies
 - Deadrick Study
 - Opportunities for Reciprocal Benefits: Electrification and Preservation Goals
 - Deconstruction Policy Study

- IV. Green Building Practices as a Foundation for Successful Fossil-Fuel-Free Mechanisms – page 30
 - Foundations of Zero Carbon Building Policy

9.A.

Addressing Real Barriers to FFF Construction

- Coefficient of Performance

- Cost of Electricity

- Ensuring Equity

- Domestic Hot Water

- Power Grid Capacity: Renewable Energy and Battery Storage

Addressing Perceived Risks and Misconceptions

- The Risk of Delaying Retrofit Challenges

- Implications of Overlooking Embodied Carbon Emissions

- Summary: Green Building Standards in FFF Zoning Mechanisms

V. Green Buildings: Cost Considerations and Available Incentives – page 38

- Cost Parity

- MassSave Incentives, Local Possibilities, and Neighboring Communities

- Federal Incentives

VI. Zoning Incentives – page 42

- Five Zoning Incentive Mechanisms

- Breadth of Applicability and Effectiveness

 - Zoning By-law Provisions

 - State Law

 - Existing Conditions

 - Discussions with Developers and Technical Experts

 - Other Obstacles to Applicability and Effectiveness

- Impacts and Other Considerations

 - Inconsistency in Impacts from a “Blanket Approach”

 - Demolitions

 - Local Historic Districts

 - Electrification Without Energy Efficiency Standards

- Summary of Findings on Zoning Incentives

VII. Conclusion and Overall Findings – page 66

Strategies for Implementing Sustainability Policy

Zoning Incentives

VIII. Alternative strategies and Next Steps – page 67

Zoning Mechanisms

Overlay Districts with Green Building Standards

Green Building Standards for Design Review

Financial Incentives

Education and Coaching

Preservation of Embodied Carbon, Preservation Goals, Alternatives to Demolition

Summary: Recommended Next Steps

I. Executive Summary

The Planning Department has prepared this report in response to a charge by the Select Board to assess the potential of zoning incentives and other non-zoning options for encouraging fossil-fuel-free (FFF) buildings. To inform the findings, the study team gathered data and information on the Town's existing Zoning By-law and relevant state statute, interviews with developers and technical experts, existing conditions, recent permitting history, and other sources.

An effective incentive for FFF construction must be reasonably successful at the following:

- Be widely applicable,
- Be likely to be utilized,
- Have relatively minimal adverse impact on the town's character,
- Be practical to implement, and
- Synergize with other Town policy goals.

It is on the basis of these criteria that various incentives were examined.

Key Findings

Potential of Zoning Incentives:

- Data on existing conditions and recent permitting from 2018 and 2019 show that applications for zoning relief from dimensional requirements (FAR, setbacks, parking, etc...) are common. This suggests that incentives related to those requirements have potential to encourage FFF construction because they offer desirable benefits. (*see Section VI*)
- However, the Town's Zoning By-law and state statute already provide a variety of options for receiving zoning relief that zoning incentives would struggle to compete with, impacting the number of projects they would apply to and their rates of utilization. When applicants can get the same zoning benefits through other, more accessible means, incentives that require electrification are unlikely to be used. To be effective and applicable, zoning incentives would need to be easily accessible and offer substantial benefits; unfortunately, the more accessible and beneficial the incentives become, the more they could adversely affect the character of Brookline's neighborhoods. (*see Section VI*)
- Zoning incentives, if implemented in a way that overcomes the applicability and utilization challenges, risk causing potentially serious adverse impacts for the town's built environment.
 - The impacts may be very significant in some neighborhoods/districts while nonexistent in others – a blanket approach to zoning incentives is therefore not

9.A.

advised. Limited implementation of sustainability incentives/mandates as part of ongoing land use studies (*see Section III*) and rezoning initiatives aimed at discrete sectors of town is the recommended approach.

- The difficulty involved with retrofitting existing buildings to be FFF may steer developers seeking to benefit from available zoning incentives towards demolitions of existing buildings. Discouraging demolitions, encouraging adaptive reuse, and reducing embodied carbon emissions are important aspects of historic preservation and sustainability on which the Town should focus.
- Electrification is only one of the necessary upgrades needed to make buildings truly sustainable (*see Section IV*). Electrification reduces the amount of operational emissions the building produces on-site; high energy efficiency reduces the amount of energy the building's operation consumes. This is particularly salient given that electric heat in Massachusetts costs between three to five times more than traditional heat sources. Incentivizing or requiring building electrification without simultaneously requiring standards for high energy-efficiency (beyond the current Stretch Code) risks producing buildings with very high operating costs, which are passed on to buyers/residents. At a sufficiently large scale, this trend can damage the public's perception of electric heating systems and set back sustainability initiatives in the long run.

Alternative Strategies (*see Section VIII*):

- To avoid the unintended consequences of incentives for FFF buildings, this report recommends incorporating electrification and high-performance energy efficiency standards through the application of the overlay district mechanism. Overlay zoning districts allow the Town to negotiate community benefits in exchange for more permissive zoning in discrete areas. This approach allows the Town to implement incentives/requirements that take into account the unique characteristics of each neighborhood and can serve as a trial approach preceding more widespread application or state action.
- Because electricity is much more expensive than natural gas in Massachusetts, property owners and residents assume that an electric building is too expensive to operate, which overlooks not only the cost parity but also the indoor air quality and comfort levels that are achieved by meeting Passive House standards. A robust education campaign aimed at informing the public about the benefits and potential cost-savings associated with electrification and energy-efficient construction is needed. The purpose of the campaign is to simultaneously improve the public's perception of electric heating systems and improve the marketability of electric dwelling units in an effort to reduce the barriers faced by developers in the move towards FFF new construction.
- Depending on the terms of a landmark Climate Bill being negotiated between Governor Baker and the legislature, municipalities may soon have the option to ban on-site combustion through a net zero stretch code. The Town should advocate for

9.A.

aggressive action on the state level including but not limited to the Town's Home Rule petition mechanism. A state-wide approach requiring or enabling municipalities to pursue their commitment to sustainability is critical.

Recommended Next Steps (from Section VIII):

1. Prepare Green Building Guidelines

Channel efforts into a consolidated set of standards that can be used in different ways:

- a. To attach to an overlay district mechanism, new (or existing if re-negotiation expected)
- b. To amend Community and Environmental Impact Standards under Sec. 5.09 Design Review
- c. To advocate at the State Level for a net zero stretch code that is applicable to the Brookline building stock

Core Standards:

- a. No on-site combustion (with reasonable exceptions)
- b. Passive House standards
- c. Renewable energy plan
- d. Electric Vehicle charging

Additional Standards for Consideration (as applicable):

- a. Life Cycle Assessment (Embodied Carbon)
- b. Deconstruction Policy
- c. Low Impact Development Standards
- d. Open Space / Tree Canopy Conservation
- e. Passive Design / Site Optimization Standards

2. Identify Gaps in MassSave (and other financial) Incentives to Support Electrification

- a. Retrofitting existing single-, two-family to Passive House and heat pumps
- b. Retrofitting existing multifamily to Passive House and heat pumps
- c. Retrofitting existing historic structures to Passive House and heat pumps
- d. Advocate at the State Level

3. Plan Education

- a. Scope requisite resources
- b. Campaign for homeowners and renters
- c. Peer influencers for developers (and case studies)
- d. One-stop resource hub to connect available incentives
- e. Passive House guide (especially for historic structures)
- f. Skill sets needed on staff, especially inspectors and coaches

9.A.

4. Draft Embodied Carbon Policy
5. Plan Retrofit Strategies

II. Introduction and Background

<u>CONTENTS</u>	
1.	Scope of Study and Methodology
	<i>Charge</i>
	<i>Timing and Associated Limitations</i>
	<i>Methodology</i>
2.	Selected Local and State Building Energy and Emissions Policies
3.	Warrant Article 21
4.	Petitioners' Proposed Warrant Article
5.	Definitions

Scope of Study and Methodology

Charge

This report was prepared by the Town of Brookline Planning and Community Development Department (aka the Planning Department) in response to a charge issued by the Select Board to review and evaluate the use of zoning and other incentives to promote fossil-fuel-free (FFF) construction within Brookline. The charge was unanimously approved by the Select Board at its meeting on September 15, 2020.

The charge states that the report "shall evaluate a range of zoning incentives to influence FFF construction in all zoning districts of the town including, but not limited to, potential bonuses for height, floor area, parking, setback, etc. To the extent possible, the report shall use data and cite existing studies to evaluate the use of zoning incentives. The report shall also review existing zoning by-law incentives, processes, and language that could be modified to incorporate FFF requirements and shall examine and consider non by-law incentive mechanisms, including waivers, fees, fast-track permitting, and special permitting."

Timing and Associated Limitations

By early October 2020, a staff team comprised of members of the Planning Department together with staff from the Building and Legal Departments was formed to carry out the charge. The team conducted research on sustainability, electrification, and related incentive mechanisms throughout the months of October, November, and December. The research that informed the findings of this report consists primarily of interviews with developers and technical experts in the field of sustainability, data collection on existing conditions, and a detailed survey of the Town's Zoning By-laws.

The staff team identified several additional areas of research that should be conducted if further study of this issue continues. A wide-ranging survey of property owners could better inform the Town on the appetite of homeowners for retrofitting existing buildings to be FFF, and the mechanics and economics behind such conversions. Whereas this report makes a few general statements about the impact of zoning incentives on the character of existing neighborhoods, a more granular analysis involving currently

unavailable dimensional data could provide a more specific understanding of neighborhood impacts.

Methodology

A “Good” Incentive

What defines a “good” incentive? To review and evaluate potential incentives for encouraging FFF construction, it is imperative to first identify the values and criteria on which various incentives would be assessed. The Planning Department identified the following five general criteria on which to base an evaluation of incentives:

1. *Widespread applicability:* If the goal of an incentive is to encourage as much FFF construction as possible (and it should be), then an incentive should be applicable/usable by as many projects as possible. All else being equal, an incentive that only applies to a small niche of construction activity is significantly less desirable than an incentive that applies to all construction activity.
2. *Likely to be utilized:* Like the first criteria, having an incentive that is likely to be used is important to encourage as much FFF construction as possible. While the first criterion speaks to the *breadth* of projects that can make use of the incentive, this criterion deals with *whether* those projects would use it. An incentive that applies to all construction activity but where the benefits are so minor that the incentive is never employed is less desirable than an incentive that applies to half of construction activity but is employed regularly.
3. *Impact on Built Environment:* A good incentive should offer enough benefit to be utilized but not *so much* benefit that a project making use of the incentive deviates unacceptably from the character of the neighborhood in which it is located. Incentives that are not used because the benefits are too small fail to meet the second criteria, but where an incentive offers so much benefit that it is used regularly may fail this third criteria.
4. *Practical to Implement:* Incentives that cannot be implemented for legal or practical reasons fail this fourth criteria. Legal impediments are straightforward, but an incentive could also be impractical by requiring a level of enforcement/administration that the Town cannot reasonably provide. In the case of a zoning incentive especially, it could be so complex to incorporate into the Town’s existing By-law that a simpler, yet otherwise less effective option, is still preferable.
5. *Synergy with Town Policy Goals:* It is generally recognized that Town policy goals are not always in line with one another. Regardless, an incentive should strive to minimally conflict with other Town policy goals or, ideally, synergize with those goals. An incentive that eliminates inclusionary zoning requirements for FFF buildings would completely fail this criterion.

The various incentives explored in this report succeed to varying degrees in meeting each of these five criteria. It is important to note that a “good” incentive does not need to

9.A.

meet all five criteria – the criteria simply offer a framework for analysis, not a series of requirements.

Incentives Examined

While this report does evaluate and recommend other types of incentives, the focus of the report revolves around a list of five zoning incentives that was generated and mutually agreed to by Planning Department staff and the petitioners referred to in the Select Board charge. Zoning incentives would provide the following benefits to a development provided that any buildings included in the development are FFF:

1. Dimensional bonuses: this incentive captures any mechanism that would provide more relaxed floor area ratio, setbacks, and height. The majority of the team's time was spent assessing this mechanism.
2. Floor Area Ratio (FAR) waivers: a much more narrow and specific mechanism, FAR waivers involve a complete waiver of the FAR requirement in cases where the building envelope or footprint remain unchanged allowing for the conversion of attic and basement space to habitable area.
3. Parking requirement reductions: an incentive that involves reducing the minimum parking requirements of the Zoning By-law.
4. Housing density bonus: an incentive that allows one (or several) additional housing units than the zoning district allows (i.e. a single-family property would be allowed two units, a two-family property would be allowed three units, etc.).
5. Expedited permitting: an incentive that involves a reduction in the permitting timeframe or a reduction in permitting fees.

In addition to the above zoning incentives, the team considered and reviewed the potential of non-zoning incentives (financial assistance and tax rebates) as well as other non-incentive mechanisms that would advance FFF construction in town.

Research Methodology

Data and information were gathered from several sources to understand the ways in which different incentives would meet the above criteria. Interviews with developers who work in Brookline provided insight into whether incentives would be utilized and applicable (criteria 1 and 2). Interviews with technical experts informed the team's understanding of the costs associated with electrification and existing incentives at the state and federal level, providing insight into applicability, utilization, practicality, and synergy with sustainability goals (criteria 1, 2, 4, and 5). Data on existing conditions and permitting history helped highlight the conformance of properties in Brookline to current dimensional requirements and common permitting needs provided insight into applicability, utilization, and the impact on the built environment (criteria 1, 2, and 3). A survey of the Zoning By-law identifying provisions that could conflict or undermine proposed incentives informed applicability, utilization, and practicality (criteria 1, 2, and 4). Sections below provide a brief review of data gathering methodology.

9.A.

Interviews with Developers and Technical Experts: The team conducted 11 interviews, consisting of developers/architects and technical experts in the field of sustainable design. The developers were chosen to represent a spectrum of expertise in building typologies and varying experience with sustainability. Two of the chosen developers/architects focus mostly on housing ranging from one to four units, one with considerable experience in sustainability, and the other less so. Five of the chosen developers/architects focus mostly on multi-family housing; two of them are architects, one of whom is very experienced in sustainability and one of whom is not; three of them are developers with average experience in sustainability. The remaining four interviewees consisted of three “green” engineering firms and State Representative Tommy Vitolo.

Interviews were scheduled to last approximately one hour and questions were posed based on the expertise of the interviewee. In the case of developers and architects, the team inquired as to (among other things):

- the costs developers and architects associated with electrification,
- what barriers they faced when considering a sustainable building and why more such buildings were not being designed and constructed,
- what kind of incentives would help alleviate the costs/barriers to electrification and what kind of incentives are attractive enough for developers to bear the costs, and
- whether incentives are necessary to shift development to be FFF or whether it will happen organically and in what timeframe.

In the case of technical experts, the team asked about existing incentives available at the state and federal level, the costs associated with sustainable design, effective incentives, and other aspects of sustainability in general. Representative Vitolo provided an update on action at the state level related to a new energy code, new climate goals, and other initiatives.

Zoning By-law Survey: The team conducted a thorough review of the Town’s Zoning By-law with the intention of identifying every provision that could relate to each of the five zoning incentives identified above. The goal of this exercise was to understand existing relief available to development in Brookline and how that would affect the utilization, applicability, and impacts of the zoning incentives. As can be expected, each incentive related to several dozen provisions of the By-law, but only a portion of those provisions appears in this report. The provisions of the By-law that are highlighted in this report are those that would have a substantial or important synergy or conflict with a particular zoning incentive. Some zoning incentives, like housing density bonuses and expedited permitting, would have a vast and wide-ranging impact on all provisions of the Zoning By-law and are therefore discussed in this report in a more general sense rather than a granular examination of each provision that would be affected.

9.A.

Data Collection – Floor Area Ratio (FAR): In the case of existing conditions relating to dimensional requirements, the team was interested in gathering the FAR, height, and setbacks for existing buildings. While FAR data can, with some work, be generated from Assessor’s Office data, setbacks and height data must be collected by measuring or gathering those dimensions on an individual basis (“measuring” involves use of a mapping tool or “gathering” involves reviewing site plans on file with the Building and Planning Departments). The Planning Department is actively gathering setback and height data as part of other ongoing land use studies but only FAR data is available for inclusion in this report. Nonetheless, the data remains particularly useful for any analysis of an FAR incentive.

The FAR data used in this report was produced using the Assessor’s Office FY2020 Property Assessment database. The database provides the square footage of various portions of each building. Based on the definition of Gross Floor Area (GFA) from the Zoning By-law, the portions of the building that should contribute to the GFA were identified and added together to produce an approximation of GFA for every building. The resulting building GFA data was mapped and linked to zoning districts and organized for analysis. The sections of this report that use the collected FAR data focus specifically on the data as it relates to single-family and two-family properties. FAR data on multi-family properties and commercial uses is unreliable (due to difficulties involved in collecting and aggregating the data) and less useful for this report’s analysis.

Data Collection – Permitting Records: Permitting record statistics used in this report are based on records from the Building and Planning Departments. The Town’s online permitting system (Accela) provides a relatively efficient mechanism to extract and summarize data on permitting activity. The Planning Department extracted Accela permitting data from calendar years 2018 and 2019. Information on Building Permits from those years was generated and includes the address associated with the permit, the type of building (commercial/residential), type of improvement (kitchen renovation, new building, siding/roof work, etc.), fees paid, zoning district, and total job cost. Likewise, Accela was used to produce information on Special Permits and Variances (zoning relief) cases from 2018 and 2019 which includes the address associated with the case, the zoning district, and the section of the Zoning By-law for which it was cited.

Selected Local and State Building Energy and Emissions Policies

Based on the recommendations of its Climate Action Committee in December 2017, the Select Board adopted an updated Climate Action Plan (CAP)¹, proposed as a living document. It spans six strategic sustainability policy areas and “prioritizes planning to achieve no reliance on fossil fuels by 2050 town-wide,” a departure from the emissions 2050 target of 80% below the 1990 level set forth in the 2008 Global Warming Solutions

¹ [Brookline Climate Action Plan December 2017](#)

9.A.

Act (GWSA). The Town’s more aggressive CAP policy is predicated on the foundation of “greater energy efficiency, increased renewable energy, and progress toward electricity-sourced systems.” The research of the Committee’s Net Zero Ninth School Subcommittee concluded in a report earlier in 2017 that a fossil-fuel-free approach to building design – not merely adopting a “net zero” concept – is likely to minimize greenhouse-gas emissions consistent with Town goals². Refer to *Table 1* below for a Timeline of Selected Policy Actions at the Local and State Level.

Table II-1 - Timeline of Selected Policy Actions at the Local and State Level

2002	Town adopts Local Climate Action Plan to reduce greenhouse gas emissions.
2008	Global Warming Solutions Act (GWSA) requires the EEA Secretary to adopt a statewide GHG emissions limit for 2050 that is at least 80 percent below the State’s 1990 emissions level, as well as interim limits for 2030 and 2040.
2010	Town adopts the Building Stretch Code, which is based on the published International Energy Conservation Code (IECC) with an increase in building efficiency requirements and the use of third-party testing and rating of building energy performance.
2012	Town adopts 2012 Climate Action Plan and targets an 80% reduction of GHGe over 1990 levels by 2050.
2015	Town updates Appendix A to 2012 Climate Action Plan.
November 15, 2016	Town Meeting passed a warrant article establishing Emerald Island Special District (EISD). Section 5.06.4 (j) (2) (d) provides that all new buildings or renovation to existing buildings shall be LEED Silver Certifiable or higher.
September 2017	Net Zero Ninth School Subcommittee, appointed by the Climate Action Committee in Summer 2016, issues interim report with the recommendation, “A Fossil-Fuel-Free approach to building design is likely to best address the Town’s goals of energy efficiency and reduction of greenhouse-gas emissions.”
Spring 2017	Town Meeting votes to sign on as a non-state actor to the Paris Climate Agreement , a global framework to avoid dangerous climate change by limiting global warming to well below 2°C and pursuing efforts to limit it to 1.5°C.
Fall 2017	Town Meeting passed a resolution to set ambitious energy goals for the two new school projects: <ul style="list-style-type: none"> ○ a minimum EUI of 30 with a target of 25 ○ a minimum 13 out of 16 points Optimize Energy Performance LEED with a target of 16/16 ○ a minimum of LEED v4 Silver with a target of LEED v4 Platinum
March 13, 2017	Attorney General states that the LEED requirement for the Emerald Island Special District conflicts with State Building Code and questions how the Town would enforce the requirement should the property owner appeal. Nonetheless, the AG did not strike language from the zoning amendment.
December 2017	Select Board adopts 2018 Climate Action Plan spanning six strategic categories, “prioritizing planning to achieve no reliance on fossil fuels by 2050 Town-wide, and

² [Interim Report and Recommendations of the Net Zero Ninth School Subcommittee of the Selectmen’s Climate Action Committee, September 25, 2017](#)

9.A.

	<i>predicated on greater Energy Efficiency, increased Renewable Energy (decarbonization), progress toward Electricity-sourced Systems.”</i>
Fall 2018	Town Meeting votes against granting an easement to gas utility company to install and maintain a gas line on the Fire Station 6.
Fall 2019	Town Meeting votes to require non-fossil fuel systems in new construction and gut rehabilitation projects in Brookline with some exceptions (Warrant Article 21).
April 2020	Baker Administration issues Letter of Determination committing to net zero by 2050: A level of statewide greenhouse gas emissions that is equal in quantity to the amount of carbon dioxide or its equivalent that is removed from the atmosphere and stored annually by, or attributable to, the Commonwealth; provided, however, that in no event shall the level of emissions be greater than a level that is 85% below (formerly 80%) the 1990 level. Staff note: This 85% commitment is specific to the current administration. The 80% target in the GWSA Act remains unchanged.
May 2020	Northeast Energy Efficiency Partnerships (NEEP) submits to the Board of Building Regulations and Standards (BBRS) the first version of the Energy Zero (EZ) Stretch Code, which prohibited on-site combustion, “following the lead of Brookline Warrant Article 21.”
Spring 2020	BBRS votes down EZ Code proposal. Proposal is referred to Energy Advisory Committee, which has yet to opine.
July 2020	Attorney General’s office rules that Brookline Warrant Article 21 fossil-fuel-free mandate was in conflict with the State building code and plumbing code.
November 2020	In response to AG’s ruling, NEEP submits to BBRS EZ Code 2.0 , targeting January 2022 building code cycle, which “ <i>added a Passive House compliance path, removed the ‘no on-site combustion’ provision, and added a minimum Coefficient of Performance (CoP) for building heating and service water. While not outright prohibiting on-site combustion, the minimum CoP heavily favors the use of high efficiency, all-electric systems like heat pumps and hot water heaters,</i> ” that is, pathways to electrification. (EZ Code proposes a CoP 2.0. The most efficient gas furnace achieves a CoP less than 1.0.) The proposal includes renewable energy and additional requirements, along with options for reducing embodied carbon, and reporting standards.
December 30, 2020	Gov. Baker releases Massachusetts 2050 Decarbonization Roadmap and Interim 2030 Climate Energy and Climate Plan (2030 CECP), the finalization of which is targeted for Spring 2021. Provisions currently target of 45% reduction in GHG emissions over 1990 levels by 2030 • DOER to present a new high-performance stretch energy code to the Board of Building Regulation and Standards in 2021 that allows for Green Communities to opt in starting in 2022 and will become mandatory and effective statewide no later than January 1, 2028. • DOER to work to eliminate Mass Save® incentives for fossil fuel equipment in new construction in 2022 and align incentives with a high-performance building code including incentives for Passive House construction. • EEA to support establishing state appliance standards by statute. DOER will work to support similar action at the federal level. EEA expresses concern that a 2030 emissions targets above 45% is potentially uneconomic. The Legislature is concerned that a 45% target by 2030 will not put the State on track to meet net zero by 2050.
January 4, 2021	State legislature files Bill S.2995 , An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy. Provisions target a 50% reduction in GHG emissions

9.A.

	over 1990 levels by 2030. Would transfer the creation of net zero energy stretch energy code from BBRS to DOER. Would allow municipalities to adopt net zero regulations (Stretch Code communities).
January 14, 2021	Gov. Baker vetoes Bill S.2995.
January 28, 2021	Legislature refiles Climate Bill (Bill S.9)
February 8, 2021	Gov. Baker returns with amendments.
Spring 2021	MassSave solicits comments for Three-Year Energy Efficiency Plan

Takeaway: Staff expects the Climate Bill to get signed by March. We expect that the Stretch Code will get revised with higher energy targets. It is not clear if it will include a provision for communities to ban on-site combustion. It is expected that changes to the Stretch Code will undergo a public process and that the Town should be prepared to submit comments in a consolidated manner, and especially for commensurate incentives.

Warrant Article 21

The shift to banning fossil fuels outright culminated in the Fall 2018 Town Meeting vote against granting an easement to National Grid to install and maintain a gas line to the recently renovated Fire Station 6. In November 2019, the Town became the first municipality in Massachusetts to ban the installation of oil and gas piping in new construction and existing buildings undergoing extensive renovations (with limited exceptions) when Town Meeting voted overwhelmingly to pass Warrant Article 21 (WA 21).

Beyond its broad base of support in Brookline, WA 21 had reverberations at the national level, where it was eyed by other communities looking for a regulatory model to curb fossil fuel use in buildings. In Massachusetts, it has served as the catalyst for a zero energy stretch code proposal. Specifically, in May 2020 the Northeast Energy Efficiency Partnerships (NEEP), “following the lead of Brookline Warrant Article 21,” submitted the first version of its Energy Zero (EZ) Stretch Code proposal, outright prohibiting on-site combustion, to the Board of Building Regulations and Standards (BBRS), which voted to reject it.

Despite being sympathetic to the objective of WA 21, the Attorney General ruled that the mandate conflicts with (a) the State Building Code, which sets forth construction standards; (b) the Gas Code, which prohibits local authorities from imposing requirements that deviate from the State Plumbing Board; and (c) Massachusetts Department of Public Utilities, which regulates the sale and distribution of natural gas and which preempts localities from enacting a law that would interfere with the policy to provide uniform utility services to the public. The ruling went on to suggest an alternative method to the mandatory approach taken by WA 21:

9.A.

“the Town may consider adopting incentive programs to nudge property owners in that direction [non-fossil-fuel systems]. However, the by-law here forces a decision on property owners and thereby interferes with the legislative goal in Chapter 164 of uniform utility options statewide. The Town is thus preempted from utilizing this method to achieve its stated goals.”

Despite the Attorney General’s ruling, the Planning Department honors the fact that Town Meeting approved Warrant Article 21 and seeks to assert that position in its planning projects and initiatives. For example, FFF construction is a Town priority during negotiations regarding overlay districts. The Waldo-Durgin Overlay District and the Fisher Hill Special Overlay District – each containing multiple parcels controlled by one owner – memorialized commitments by the developers to conduct due diligence on the feasibility and economic viability of all-electric buildings in their respective Memoranda of Agreement.

Petitioners’ Proposed Warrant Article

The impetus for this report was the intended submission of a citizen’s Warrant Article for 2020 Fall Town Meeting which would have offered dimensional incentives to promote FFF buildings. The “petitioners” proposal has evolved over the course of this study, and the latest version received by the Planning Department is provided below. While this report does not directly analyze or comment on this proposal, Section VI of this report reviews various zoning incentive mechanisms and thereby indirectly provides guidance on whether the proposal below would succeed at encouraging FFF buildings and how it should be amended to be more effective.

Table II-2 - Petitioner's Proposal

Summary of proposed FFF zoning incentives by zoning district						
Zone	Description	Parking Relief	Use density	FAR/Height	Setback Relief	Special Permit
S	Single-Family	Yes*	Yes (+1 unit)	10% /5ft^^	Yes^^^	No
SC	Single-Family/Converted Two-family	Yes*	Yes (+1 unit)^	10% /5ft^^	Yes^^^	No
T	Two-Family	Yes*	Yes (+1 unit)^	10% /5ft^^	Yes^^^	No
F	Three-Family	Yes*	Yes (+1 unit)^	10%/5ft^^	Yes^^^	No
M	Apartments	Yes (none required)	No	20%/10ft	No	Yes
L	Local Business	Yes (none required)	No	20%/10ft	No	Yes
G	General Business	Yes (none required)	No	20%/10ft	No	Yes
O	Office	NA**	No	20%/10ft	No	Yes
I	Industrial	Yes	No	Yes	No	Yes

* No required parking for any additional unit(s) allowed by a use density increase

** O districts are only commercial uses. There are only two O districts; both O districts are in the TPOD, where there are generally no commercial parking minimums.

^ In SC districts, allowing by-right two-family dwellings where otherwise prohibited due to age of dwelling, insufficient lot size, lot width, or yard size. In T districts, allowing two-family dwellings by-right where otherwise prohibited due to insufficient lot size, lot width, or yard size. In F districts, allowing three-family dwellings by-right where otherwise prohibited due to insufficient lot size, lot width, or yard size. Allowing by-right three-family dwellings in T districts otherwise eligible for two family dwellings. Allowing by-right four-family dwellings in F districts otherwise eligible for three family dwellings.

^^ Where the design intent of the existing structure is substantially preserved. For the purposes of these incentives, this means the preservation of the portion of the existing exterior envelope of a structure that may be seen from any street frontage that the building abuts. This shall not preclude any modifications to those elements, including additions, dormers, bays, changes in roofline or height, etc. that are consistent with the general style and massing of the structure. Any modification of an existing structure is still subject to the review of the Preservation Commission.

^^^ Setback relief allows, by-right, insulation and equipment related to Fossil Fuel Free construction.

Stipulations for Accessing Zoning Incentives

1. Fossil Fuel Free Construction Requirements

In return for providing these zoning incentives and consistent with 2019 Special Town Meeting Article 21, Fossil Fuel Free (FFF) refers to construction or renovation that results in an entire building or dwelling unit that uses electricity rather than on-site combustion of fossil fuels (oil or gas) in supporting its operation, with these specific exemptions:

- A. Backup electrical generators.
- B. Cooking appliances, including portable propane appliances for outdoor cooking and heating.
- C. Potable or domestic hot water from centralized hot water systems in buildings with floor areas of at least 10,000 square feet, provided that the Engineer of Record certifies that no commercially available electric hot water heater exists that could meet the required hot water demand for less than 150% of installation or operational costs, compared to a conventional fossil-fuel hot water system.

2. Incentives are not additive with existing zoning incentives

The additional FAR and height allowed as an FFF incentive may not be combined with or added to the exceptions to maximum Floor Area Ratio permitted under Section 5.22 for single and two-family dwellings, if the total increase in FAR exceeds the 120% to 130% allowed under that Section; or to Public Benefit Incentives for FAR and Height for larger projects in zoning districts with an FAR of 1.5 or more.

3. Exceptions in Overlay Districts

FFF incentives are not intended to apply to recently upzoned districts for which the Town has entered into Memorandum of Agreements (MOA). This includes the Coolidge Corner Design Overlay District, the Davis Path Overlay District, the Fisher Hill Town-Owned Reservoir Mixed Income Housing Overlay District, the Fisher Hill Overlay District, the Cleveland Circle Hotel Overlay District, the GMR-2.0 District, and the Waldo-Durgin Overlay District. Town Council should confirm if this is already effectively prevented under the MOAs.

In the Emerald Island Special District, the Fossil Fuel Free construction shall be added as a requirement to access the existing zoning incentives in that district: "All new buildings and renovations to existing buildings shall be LEED Silver and be FFF." (underlined is addition)

Definitions

Below is a list of terms used in this report and their definition for the purpose of the report.

Air Source Heat Pump	ASHP	An air source heat pump uses compression and evaporation to transfer thermal energy from the ambient outdoor environment to a thermal load as Useful Thermal Energy.
Coefficient of Performance	CoP	The efficiency of heat pumps is described by their coefficient of performance, or CoP. Air source heat pumps typically have a coefficient of performance of around 2.0 (though this value varies in cold weather). This means they deliver 2 kWh of heat for every kWh of electricity consumed.
Deconstruction		Deconstruction is a process of building disassembly that removes materials to preserve their integrity so that they can be reused.

9.A.

Dimensional Requirements		Requirements of the Town's Zoning By-law that affect the size of buildings. FAR, setbacks, and height are the primary dimensional requirements, although open space requirements also indirectly act as dimensional requirements. Housing density and parking are not dimensional requirements.
Embodied Carbon Emissions	eCO ₂ e	The amount of carbon emitted during the making of a building. This includes extraction of raw materials, manufacture and refinement of materials, transport, the building phase of the product or structure, and the deconstruction and disposal of materials at the end of life. Embodied carbon emissions contribute 11% to global GHGe annually.
Energy Use Intensity	EUI	A unit of measurement that describes a building's energy use. EUI represents the energy consumed by a building relative to its size. A building's EUI is calculated by taking the total energy consumed in one year (measured in kBtu) and dividing it by the total floor space of the building. It is used to compare the energy efficiency of buildings with different sizes and to compare building design to efficiency benchmarks. Source EUI accounts for energy lost during production, transmission, and delivery to the site. In contrast, site EUI pertains to energy use at the building's site not the power plant.
Floor Area Ratio	FAR	The ratio of a building's Gross Floor Area (defined in the Zoning By-law) to its lot area. A 2,000 square foot building on a 10,000 square foot lot has an FAR of 0.2.
Fossil Fuel Free	FFF	No use of fossil fuel fuels, like natural gas, to power building systems on site
Greenhouse gas emissions	GHGe	Our climate has always been regulated by gases, including water vapor, carbon dioxide, methane, and nitrous oxide, that blanket the earth. These gases trap heat that would otherwise be reflected out to space; without them our planet would be too cold to support life. We refer to these gases as "greenhouse gases" (GHGs) for their heat trapping capacity. Changes in temperature occur naturally, due to such events as volcanic eruptions, and variations in solar energy entering the atmosphere. In the past century, human activity associated with industrialization has contributed to a growing concentration of GHGs in our atmosphere. The combustion of fossil fuels, our primary energy source in the age of industrialization, releases GHGs into the atmosphere. As shown in Figure 1, there is a correlation between increases in carbon dioxide concentrations and global temperature. There is by now widespread consensus among scientists regarding the warming of our climate and its causes. Source: Brookline Vulnerability Assessment 2017
Ground Source Heat Pump	GSHP	Sometimes referred to as GeoExchange, geothermal, earth-coupled, or water-source heat pumps, ground-source heat pumps, have been in use since the late 1940s. They use the constant temperature of the earth as the exchange medium instead of the outside air temperature.
Net Zero		Usually means a building produces as much renewable energy on-site as it consumes on-site on an annual basis. The definition of net zero must be spelled out whenever it is applied. A ban of on-site combustion must be stated, if intended.
Operational Emissions	oCO ₂ e	The amount of carbon emitted during the operational or in-use phase of a building. This includes the use, management, and maintenance of a product or structure. Operational carbon currently accounts for 28% of global GHGe annually.
Passive House		Passive building comprises a set of design principles used to attain a quantifiable and rigorous level of energy efficiency within a specific quantifiable comfort level. "Optimize your gains and losses" based on climate summarizes the approach. To that end, a passive building is designed and built in accordance with these five building-science principles:

9.A.

		<ul style="list-style-type: none"> • Employs continuous insulation throughout its entire envelope without any thermal bridging. • The building envelope is extremely airtight, preventing infiltration of outside air and loss of conditioned air. • Employs high-performance windows (double or triple-paned windows depending on climate and building type) and doors - solar gain is managed to exploit the sun's energy for heating purposes in the heating season and to minimize overheating during the cooling season. • Uses some form of balanced heat- and moisture-recovery ventilation. • Uses a minimal space conditioning system. • Continuous mechanical ventilation of fresh filtered air provides superb indoor air quality. • A comprehensive systems approach to modeling, design, and construction produces extremely resilient buildings. • Passive building principles offer the best path to Net Zero and Net Positive buildings by minimizing the load that renewables are required to provide. <p>Source: PHIUS.org Note: Passivhaus is an alternative with some differences in standards.</p>
Setback		The distance between a property line and the nearest point of a building on that property. Setbacks pertain to front yard, rear yard, and side yard, for example.
Special Permit		A form of relief from the requirements of the Zoning By-law that is specifically accommodated within the text of the By-law or within the text of state statute. The process for a Special Permit in Brookline takes approximately 4-5 months and involves several meetings with the Planning Department, Planning Board, and Zoning Board of Appeals. Also see Variance.
Stretch Code		In 2009, Massachusetts became the first state to adopt an above-code appendix to the "base" building energy code-the "Stretch Code". The Stretch Code, which emphasizes energy performance, as opposed to prescriptive requirements, is designed to result in cost-effective construction that is more energy efficient than that built to the "base" energy code. The Stretch Code was last updated in 2017, in conjunction with the 2015 IECC update. Brookline voted to adopt the stretch code. The stretch code will likely be upgraded to meet higher efficiency standards, possibly to Passive House levels—this is a subject of the latest Climate Bill.
Variance		A form of relief from the requirements of the Zoning By-law that <i>is not</i> specifically accommodated in the By-law and for which the requirements for approval are significant. The process for a Variance in Brookline takes approximately 4-5 months and involves several meetings with the Planning Department, Planning Board, and Zoning Board of Appeals

9.A.

Zero Carbon		Zero carbon means that no carbon emissions are being produced from a product/service e.g. zero-carbon electricity could be provided by a 100% renewable energy supplier.
Zero Energy Buildings	ZEB	A building that produces as much renewable energy on-site as it consumes in source energy (accounting for the different amounts energy needed to obtain each type of fuel and deliver to the project site) on an annual basis. A ban of on-site combustion must be stated, if intended.

III. Ongoing and Planned Land Use Studies and Synergy with Electrification Strategies

BRIEF

The Town's various land use policy goals, including sustainability policy, are most effectively synergized through land use studies and the application of overlay districts that can offer zoning benefits while leveraging as many policy goals as feasible. This process also ensures that the urban design fabric of discrete neighborhoods is respected.

CONTENTS

1. Synergizing Town Policy Goals Through Land Use Studies and Overlay Districts
2. Studies with High Potential for Electrification Strategies
 - Multifamily Study*
 - Parking Demand Study*
 - Lower Boylston and Upper Boylston Studies*
3. Studies with Low Potential for Electrification Strategies
 - Deadrick Study*
4. Opportunities for Reciprocal Benefits: Electrification and Preservation Goals
 - Deconstruction Policy Study*

Synergizing Town Policy Goals Through Land Use Studies and Overlay Districts

The Planning Department seeks to incorporate and integrate Town policies into its planning initiatives to ensure that they do not conflict with each other and, to the maximum extent possible, are actually mutually supportive. Neighborhood protection, historic preservation, housing production/affordable housing, thriving business districts, sustainability, and enhanced open space do not necessarily have mutually exclusive objectives but in fact possess inherent compatibilities to the extent that they all seek to protect and enhance the quality of life.

Insert III-1 provides a list of 17 ongoing or programmed studies directly facilitated by the Planning Department and in collaboration with the Building, Legal, and Public Works Departments. Studies that can be leveraged to directly advance fossil-fuel-free (FFF) construction are highlighted by a box, and mechanisms for implementation are indicated. (Refer to Section VIII of this report for a complete summary of recommended strategies for advancing FFF policy.)

Table III-1 - Selected Land Use Studies

PLANNING DEPARTMENT: SELECTED LAND USE STUDIES	
Performed by Staff unless otherwise noted	
Multifamily Study	All L, G, M zoning districts Examine dimensional controls to determine how they interact to guide, control or inhibit the development of housing and mixed-use.
Parking Demand Study	Townwide, all uses (consultant)

9.A.

	Examine how changing life styles are affecting parking demand within the context of parking supply.
Adjunct Project	Mobility Management Codification (staff) Public benefits checklist for infrastructure improvements for development projects
Lower Boylston Study	Pearl Street to Brington Road Assess opportunities for mixed-use overlay district with sustainable building standards and infrastructure upgrades
Upper Boylston Study	Newton City Line to Hammond Street Assess opportunities for mixed-use overlay district with sustainable building standards and infrastructure upgrades
Housing Production Plan (consultant)	Assess housing need and develop plan to produce additional housing. Will examine several land use mechanisms to support and encourage housing production.
Demolition Delay Bylaw - Deconstruction Policy	Possible amendment to Demolition Delay Bylaw (longer-term project) Would encourage preservation of embodied carbon and reduces C&D waste; mitigates environmental impact of new manufacture by making materials available for reuse. May be integrated into existing Demolition Delay Bylaw to provide disincentive for demolishing historic structures or included as a part of a comprehensive sustainability plan.

The timeliness of these studies is significant because (a) they provide the groundwork for future zoning amendments based on comprehensive data collection and analysis, (b) they are designed to integrate or complement multiple policy areas to avoid conflict, and (c) any recommended zoning adjustments could be incorporated into overlay districts or incentives to advance FFF construction without sacrificing (and perhaps even advancing) objectives for another policy area.

To provide a hypothetical example, a study of an area prime for redevelopment could use an overlay district¹ mechanism with multiple, integrated standards such as (a) compact development and higher density to provide more affordable housing, (b) low-impact development techniques for flood resiliency, (c) Passive House energy efficiency standards beyond code minimum, (d) no on-site combustion of fossil fuels, and (e) adaptive reuse to encourage both redevelopment and conservation of architectural elements. Zoning mechanisms intended as rewards should be carefully crafted to leverage as many policy goals as is economically feasible – and should respect the urban design fabric of discrete neighborhoods – but not be so narrowly focused that they sacrifice opportunities to implement other, equally important policies.

¹ Rather than submit recommended zoning changes as modifications to the base zoning districts, the improved zoning requirements could be provided as an overlay district with standards for Passive House benchmarks and FFF construction. Unlike changes to base zoning districts, the alternative overlay district mechanism mandates specific standards *if the owner opts* for the zoning provided by the overlay (carrot); if not, the property owner must contend with the underlying (and likely restrictive) zoning (stick). Because the mechanism provides two zoning options, it would not be in conflict with the State building and plumbing codes, as staff verified with Assistant Town Counsel Jonathan Simpson (though not yet with the Attorney General's office).

9.A.

The merit of compatible studies is that any recommendations would be based on relevant objective data analysis including in part:

- a. incongruities between existing development patterns and zoning requirements
- b. conflicting dimensional requirements
- c. constraints posed by parcel geometry
- d. dimensional requirements of newer, more prevalent building elements (like height for parking structures or wall thickness for Passive House insulation standards)
- e. documented vulnerabilities (urban heat islands, flood prone areas) that could be mitigated by zoning
- f. valuable neighborhood characteristics or development patterns, overlooked by gaps in zoning, that could be conserved through an urban-design standards framework (the existing Community and Environmental Impact Standards under Sec. 5.09 Design Review are too generic to be an effective urban design framework).
- g. existing conditions that are not desirable for replication yet are not prohibited (parking facilities fronting otherwise vibrant streetscapes)

The multifamily study, in particular, would identify zoning mechanisms for *both* conserving valued neighborhood characteristics to avoid indiscriminate demolition *and* facilitating redevelopment within the parameters of an urban design framework as applicable. The two objectives are *not* mutually exclusive and would ensure that neighborhoods can evolve and remain thriving despite economic downturns.

Studies with High Potential for Electrification Strategies

Multifamily Study

The objective of the Multifamily Study is to explore how dimensional controls within our Zoning By-law interact to guide, advance, or deter the construction of multifamily and mixed-use development. The study, to date, has confirmed that these dimensional controls actually serve as impediments to construction of multifamily buildings in Brookline. For context, between 2015 and 2019, the Town permitted over 800,000 square feet of housing through the c.40B mechanism and with a median project size of four-and-a-half stories. Seven more c.40B projects are either pending before the ZBA or in the pipeline. During that same five-year period, the Town permitted just 36,084 square feet of housing through c.40A (via Special Permits and/or Variances). Although a valuable housing production tool, c.40B has largely been used to bypass strict dimensional requirements in the underlying zoning that hamper four-story development in neighborhoods where this scale is ostensibly allowed. It is conceivable that even when the Town meets its Safe Harbor requirements (10% subsidized housing threshold) mandated by c.40B, property owners will remain undeterred, frustrated with our strict zoning, and continue to propose c.40B projects unless zoning is remedied.

What about green building standards for existing overlay districts, such the Emerald Island Special District? The multifamily study would identify existing overlay districts that have not met their development potential so that Passive House and FFF construction standards could also be applied, either by amending the existing overlay district or layering overlay districts. It is critical to note that any green building

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standards that are applied to overlay districts be vetted by a qualified technical consultant and that such standards are applied consistently across all overlay districts – new and existing – to the extent possible. For example, although the zoning for the Emerald Island Special District requires a LEED Silver standard, that does not mean the LEED points achieved for energy performance for the built medical office were optimal for electrification. Again, benchmarks for energy performance are key to ensure successful electrification. A piecemeal approach to amending existing overlay districts is not advised.

Parking Demand Study

Related to the Multifamily Study is the Parking Demand Study. We need to understand how changing attitudes toward the automobile translate into parking demand to ensure that parking requirements are appropriate given the existing supply as well as an evolving market. A census-tract based study conducted by a professional engineering firm townwide across all uses would provide independent, evidence-based recommendations for amending parking provisions of the Zoning By-law.

Lower Boylston and Upper Boylston Studies

The Lower Boylston and Upper Boylston studies are designed to assess opportunities for increased density and mixed use overlay districts. The vision for these overlays could prioritize FFF construction as well as expand housing supply and provide service amenities to the surrounding residential neighborhoods. The timing of these studies is on the heels of the Complete Streets study of Route 9 commissioned in 2018 to enhance multimodal transportation.

Studies with Low Potential for Electrification Strategies

Whereas studies with high potential for electrification strategies are in multifamily and commercial districts, land use studies focused on single- and two-family residential districts provide little potential. Considering that 75% of Brookline's land use is zoned single-family use, this limited leverage is disappointing.

Deadrick Study

The extent to which pre-existing nonconforming structures can be modified or extended pursuant to [M.G.L. c.40A Sec. 6](#) has a complicated history. However, the Massachusetts Appeals Court clarified its 2014 decision in the case of [Deadrick v. Zoning Board of Appeal of Chatham](#) ("Deadrick ruling"), providing more latitude if the structure is a single- or two-family residence. Namely, existing nonconformities may be extended as-of-right if the change does not increase or intensify the structure's nonconforming nature and, further, that increases to the nonconforming nature may be allowed by Special Permit (but not a Variance) if the altered structure is not substantially more detrimental to the neighborhood than the existing structure. In contrast, a conforming structure seeking the same modification not compliant with zoning would require a Variance. This means districts with a high degree of nonconforming structures are susceptible to the *Deadrick* ruling, rendering other zoning requirements comparatively toothless.

The Deadrick Study would identify to what degree districts are susceptible to the *Deadrick* ruling. (Section V of this report provides some initial data pertaining to nonconforming floor area ratios.)

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Of course, one way to limit the applicability of *Deadrick* is to make existing structures conforming by upzoning them. If the Town were inclined to do so, why not submit the zoning changes through an overlay district mechanism, thereby providing a means by which to attach FFF construction standards? Unlike the restrictive zoning in multifamily and commercial districts, the underlying zoning in single- and two-family districts, with the protections afforded by the *Deadrick* ruling, would render the overlay district option uncompetitive. Section V of this report expounds on the complications with pre-existing nonconformities.

Please note that time constraints precluded staff from surveying single- and two-family homeowners to discern if (a) they are aware of heat pump technology and (b) they would bundle an HVAC conversion – about \$20,000 – with an improvement project going before the Zoning Board of Appeals. Our hypothesis is that no, they would not; homeowners likely would weatherize first and then proceed to convert their HVAC systems, and pace those projects to take advantage of any MassSave incentives.

Opportunities for Reciprocal Benefits: Electrification and Preservation Goals

Deconstruction Policy Study

Deconstruction is “the careful removal of building materials to retain their integrity and value at the end of a building’s service life (as opposed to demolition, which typically destroys the materials)”² so that they can be reused. Town Preservation Planners and Sustainability Planners may consider crafting a deconstruction policy to conserve for reuse culturally valuable building components, reduce waste, minimize consumption of raw materials, and preserve embodied carbon. If integrated into the Demolition Delay By-law³, it could serve as a disincentive to demolish historic structures. The idea of a disincentive begs the question: What incentives and resources are available to Preservation Planners and the Preservation Commission to deter demolition during the stay period? Of the 350 full-demolition cases reviewed over the last 10 years, more than half were found by the Preservation Commission to be architecturally or historically significant buildings – a statistic that speaks to the vastness of Brookline’s cultural assets and a trend that has negative cultural and environmental impacts.

Table III-2 - Demolition Cases

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Full Demo Cases	25	30	37	28	36	41	51	33	36	33	350
Found Significant	11	18	15	15	26	20	19	22	19	22	187
(%)	44%	60%	41%	54%	72%	49%	37%	67%	53%	67%	53%

² Buildings That Last: Designing for Adaptability, Deconstruction, and Reuse American Institute of Architects” (2020) http://content.aia.org/sites/default/files/2020-03/ADR-Guide-final_0.pdf

³ Article 5.3 of the General By-Law requires that buildings proposed for demolition be reviewed for possible architectural or historical significance. A structure found architecturally or historically significant receives a demolition stay of 12 months, or 18 months if the structure is in the National Register of Historic Places. If the proponent works with the Preservation Commission to mitigate demolition pursuant to Sec. 5.3.10, then the stay may be lifted. Demolition is effectively prohibited in Local Historic Districts.

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How might incentives to encourage electrification dovetail with a deconstruction policy to provide a carrot-and-stick approach to deter demolition?

As Section IV of this report describes more fully, it is not possible to achieve decarbonization by 2050 without reducing embodied carbon emissions⁴, which annually contribute 11% of global GHG emissions. Historic preservation goals, therefore, can be a leading path toward preserving embodied carbon and a key part of a comprehensive climate action plan. Layered with incentives to upgrade to higher energy efficiency and convert to electric heating-and-cooling, this strategy would be a proactive way to address both retrofits of existing building stock and the critical need to protect Brookline cultural assets. Further study is warranted.

⁴ https://architecture2030.org/2030_challenges/embodied/

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INSERT III-1. RECENTLY COMPLETED, ONGOING AND PLANNED LAND USE STUDIES Box indicates high potential for mechanism to advance fossil-fuel-free/Passive House construction.

Existing Policy or Policy Study Ongoing, Scheduled, or Budgeted	Target Date for Study if applicable	Purpose of Study or Policy	Lead Division, Department, or Board *	Policy Areas Integrated (and Conflicts To Avoid)	Potential Synergy To Advance FFF
1 - Multifamily (and Mixed Use) Study	2021-2022	To identify and eliminate regulatory barriers to producing housing in L, G, M zoning districts, especially where otherwise allowed building envelope has not been achieved.	Regulatory with support from Community Planning, Economic Dev. and Sustainability Divisions	Focus on FAR waivers, reduced parking ratios, standards for street wall and rear-yard / adjacency requirements with the goal of advancing market rate and affordable housing, mixed-use, adaptive reuse and open space policy goals.	Recommended changes to dimensions table can be offered through an overlay district mechanism rather than zoning amendments to provide both carrots and sticks
2 - Lower Boylston Study	Ongoing	To develop a design vision for mixed use development	Economic Dev. and Study Committee with support from Community Planning Division	Re-zoning potential for mixed-use, affordable housing, green/FFF building	Overlay district with non-negotiable design standards. May be memorialized in MOA.
3 - Upper Boylston East Study	2022	To consider design vision for mixed use development	Economic Dev. and Economic Dev. with support from Regulatory, Community Planning and Sustainability Divisions.	Re-zoning potential for mixed-use, affordable housing, green/FFF building	Overlay district with non-negotiable design standards. May be memorialized in developer MOA.
4 - Beacon Street Private Parcel Design Study	Started in 2019	To prepare design standards for Beacon Street National Register District	Preservation Planners (Regulatory Division) with Preservation Commission	Would identify sensitive redevelopment of sites on this corridor	Adjunct. The (1) Multifamily/Mixed Use Study would look at zoning changes.
4 - Deadrick Ruling Applicability (and Gale, Bell'Alta)	Started in 2019	To identify degree of non-conformities in S and T districts. (Projects with existing non-conformities, esp FAR, are susceptible to Deadrick ruling where these non-conformities may be extended)	Regulatory Division	Eliminating this liability would require making non-conforming properties conforming (upzoning).	Very little. Zoning districts with a high degree of non-conformities would need to be upzoned to be made conforming. Overlay district mechanism (or any other incentive) is not likely to compete with the degree of latitude from zoning that a Deadrick ruling provides.
5 - Build-out Scenarios for Revenue Potential	Ongoing	Revenue potential related to various building envelopes	EDAB and Economic Dev.Division	Complements (1) Multifamily/Mixed-Use Study	Adjunct. See (1) Multifamily/Mixed-Use Study for zoning changes.
6 - Parking Demand and Supply Study (Budget approved)	2021	To provide technical parking demand study to support potential changes to Zoning parking ratios	Engineering consultant. Scope by Regulatory, Engineering-Transportation Divisions	Supports green transport goals. Helps eliminate regulatory barriers to housing—see (1). Coordinates with (7) Mobility Management (to ensure that mitigation funds are negotiated if parking ratio is reduced.	Any recommended reduction of parking ratios may be offered as zoning incentives rather than amendments to provide both carrots and sticks.
7 - Mobility Management Codification	2021	To codify public benefit/mitigation requests of Transportation Board to ensure consistent application across permitted projects	Engineering-Transportation Div.	Coordinates with (6) Parking Demand Study (parking ratio reductions)	Adjunct. Would be used in conjunction with any zoning incentives for FFF to ensure that mitigation funds are still extracted infrastructure projects
8 - Private Tree Bylaw	2021-2022	To encourage conservation of tree canopy.	Public Works and Conservation Commission	Bonuses or incentives should not conflict with open space/tree canopy bylaw. Also see Strategies 5 and 6 in Climate Action Plan (CAP)	Adjunct. Bylaw amendment would be independent of FFF incentives. Co-benefit: Tree canopies can reduce heat and cooling loads on buildings, especially in hot spot areas where multifamily housing exists and could expand. Utilizing passive design principles including tree canopy conservation improves energy efficiency makes successful electrification more conducive.
9 - Resiliency Policy Audit	Completed 2018	Through \$75,000 grant, scope was to audit Town bylaws and policies for best in-class resiliency benchmarks	Regulatory Div. and Public Works	Focus on function of and standards for open space. Potential for low-impact development and urban-heat island reduction standards for residential, multifamily, institutional projects and zoning. Also see Strategies 5, 6 in CAP	Adjunct. Design principles applied to FFF zoning mechanisms should include standards for on-site renewable energy, not only to mitigate emissions but also to reduce reliance on power grid (especially in combination with battery storage).
10 - Site Plan and Design Review with Standards	Started 2018	To integrate both applicable bylaws <u>and</u> standards in a coordinated process to ensure optimal site and building plans	Regulatory Div.	SPDR is non-discretionary; therefore can only reference <u>existing</u> bylaws and standards for site design	Update “community and environmental impact standards” under Sec. 5.09 Design Review can be updated with green building standards—not enforceable but at least values are communicated. Key where zoning incentives might not be applicable.

9.A.

INSERT III-1. RECENTLY COMPLETED, ONGOING AND PLANNED LAND USE STUDIES Box indicates high potential for mechanism to advance fossil-fuel-free/Passive House construction.

Existing Policy or Policy Study Ongoing, Scheduled, or Budgeted	Target Date for Study if applicable	Purpose of Study or Policy	Lead Division, Department, or Board	Policy Areas Integrated (and Conflicts To Avoid)	Potential Synergy To Advance FFF
11 – Monitor Accessory Dwelling Unit	Ongoing	To assess how possible restrictions discourage Accessory Dwelling Units (ADU) and conversion of inhabitable space to habitable space	Regulatory Div., Building Dept.	Encourages compact development, increased housing density, and conservation of open space	If new construction were allowed for ADUs, then yes. Adjustments to bylaw could be offered as zoning incentives . Otherwise, very low potential: Need to survey residents to discern how likely homeowners would bundle an HVAC conversation with an ADU or attic conversion project. If homeowner receives Special Permit without following through on HVAC conversion, Town would have few recourses.
12 - Inclusionary Zoning WA	Approved Fall TM 2020	Payment into housing trust triggered with construction of four instead six units or more.	Community Planning with support from Regulatory	NA	Adjunct. See (1) Multifamily Study. Removing regulatory barriers to multifamily housing production would trigger inclusionary zoning more frequently.
13 - Inclusionary Zoning % Study	Completed 2019	To assess economic feasibility of increasing inclusionary zoning beyond required 15%.	Analysis by consultant Pam McKinney	Widespread application of density bonuses without consideration of increasing affordable housing prioritizes sustainability over housing. Better to seek complementary not competing mechanisms to advance both.	NA
14 - Microunits WA	Spring TM 2021	By-law modification	Review by Regulatory Div.	Parking demand study would include this use.	Possible zoning incentive if not an amendment .
15 - Local Historic District Design Guide (update)	2022	Prohibits demolition and preserves embodied carbon. Bans use of petroleum-based products or other non-traditional building materials on building exteriors. Updates include new sustainability section with guidance on appropriate use of adaptive technology.	Preservation Planners (Regulatory Div.); Preservation Commission	Supports reduction in emissions and carbon footprint	Possible financial incentives to avoid demolition—could be coupled with Passive House/FFF standards.
16 - Demolition Delay Bylaw	Existing	Encourages preservation of embodied carbon through adaptive reuse for all buildings listed or eligible for listing on the National Register or those found historically significant by the Preservation Commission.	Town Bylaw; Preservation Planners (Regulatory Div.); Preservation Commission	Negative climate impacts of demolition should be acknowledged and balanced against reduction in emissions and carbon footprint resulting from adaptive reuse. Sustainability incentives should not encourage demolition.	Possible financial incentives to avoid demolition—could be coupled with Passive House/FFF standards. Possible life-cycle impact assessment
17 - Deconstruction Policy	TBD	Encourages preservation of embodied carbon and reduces C&D waste; mitigates environmental impact of new manufacture by making materials available for reuse	Sustainability Division; Preservation Planners; Regulatory Planners; Public Works; Building Department; Economic Development. Regional policy integration encouraged.	May be integrated into existing Demolition Bylaw to provide disincentive for demolishing historic structures or included as a part of a comprehensive sustainability plan.	Possible financial incentives to avoid demolition—could be coupled with Passive House/FFF standards. Possible life-cycle impact assessment
18 - Housing Production Plan	Update to begin mid 2021	Identify strategies to increase housing stock and in particular more opportunities for affordable housing	Community Planning	FFF policy must be implemented in a way that ensures equity. Electrification of inefficient buildings increases electricity costs that will disproportionately impact low-income populations. Must combine FFF with higher efficiency standards.	See (1) Multifamily Study. Applying Passive House/FFF design principles in Overlay District mechanism would further enhance housing affordability. (Affordable housing sector nationwide has been leading the way applying Passive House efficiency standards to reduce energy costs-- a necessary component of successful electrification and operational cost parity.)
19 - Open Space Master Plan	Ongoing	For Town owned property; however, may explore conservation techniques for private parcels.	PUBLIC WORKS: Conservation Division	Considerations for definition of open space, site optimization, site plan review checklist; implications for dimensional requirements; adjunct to multifamily study, especially flood prone areas and urban hot spots.	See (8) Private Tree Bylaw. Not a direct link to FFF incentives only co-benefits.

IV. Green Building Practices as a Foundation for Successful Fossil-Fuel-Free Mechanisms

BRIEF

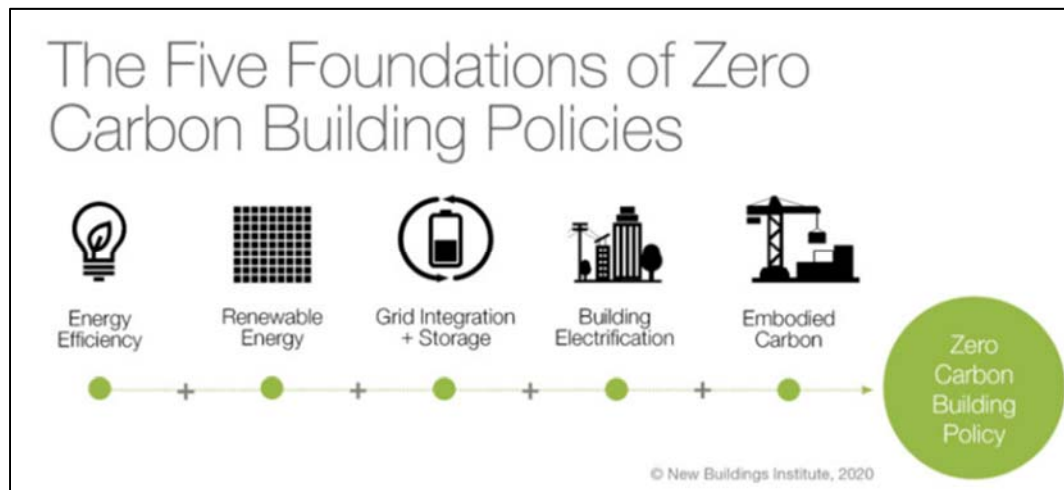
Electrifying buildings is only one part of an integrated program aimed at achieving decarbonization by 2050 that also includes on-site renewables, deep energy efficiency, and reducing embodied carbon emissions. Deep energy efficiency, in particular, goes hand-in-hand with electrification and ensures that fossil-fuel-free buildings are not merely technically feasible, but also operationally cost-effective. The barriers to electrification and the solutions bear out that requiring or incentivizing electrification must proceed as part of a more holistic package that includes: no on-site combustion, Passive House energy standards, a renewable energy plan, and a life-cycle assessment (where applicable).

CONTENTS

1. Foundations of Zero Carbon Building Policy
2. Addressing Real Barriers to FFF Construction
 - Coefficient of Performance*
 - Cost of Electricity*
 - Ensuring Equity*
 - Domestic Hot Water*
 - Power Grid Capacity: Renewable Energy and Battery Storage*
3. Addressing Perceived Risks and Misconceptions
4. The Risk of Delaying Retrofit Challenges
5. Implications of Overlooking Embodied Carbon Emissions
6. Summary: Green Building Standards in FFF Zoning Mechanisms

Foundations of Zero Carbon Building Policy

Figure IV-1 - Foundations of Zero Carbon Buildings



Fully decarbonizing by 2050 means relying on an integrated program of (1) deep energy efficiency, (2) on-site renewable energy generation, and (3) electric systems to replace fossil-fuel systems — the central [premise](#) of the [2018 Climate Action Plan](#). To mitigate the

9.A.

increased load on the power grid at peak times with increased use of electricity, thermal storage and demand management are necessary components. Moreover, according to a report issued by the United Nations Environment Programme in its Global Status Update 2017¹, embodied carbon (the manufacture of building materials) contributes 11% of annual global emissions (compared to the 28% annually contributed by building operations). According to World Green Building Council, it is estimated that more than half of total carbon emissions from all global new construction between 2020 and 2050 will be due to upfront emissions from new buildings.² In short, we cannot achieve zero emissions by 2050 without reducing embodied carbon emissions. Not doing so, has dire consequences. The Paris Climate Agreement, to which Brookline is a non-state actor, commits to keeping global average temperature below 2.0 °C. According to a report issued by the IPCC in 2018³, the difference between a global average temperature of 1.5°C and 2.0 °C will have a catastrophic impact.

Although not a new concept, zero energy buildings (ZEB) are more frequently prescribed as a *foundation* for achieving zero carbon through electrification ([New Buildings Institute](#), [Enterprise Communities](#)). The Cities of Somerville, Boston, and Cambridge are writing their own Zero Energy (ZE) codes. The latest EZ proposal to the BBRS would replace the existing Stretch Code with Zero Energy prescriptive standards providing pathways to electrification. The Climate Bill (S.9) sent to Governor Baker has a net zero stretch code provision.⁴ This ZEB strategy does *not* imply that the application of non-fossil fuel systems should be delayed, but rather – as sustainable-building practitioners we interviewed cautioned – electrification *without* energy performance standards is counterproductive. Going significantly beyond Stretch Code to design an air-tight, superinsulated building envelope to achieve the lowest possible energy use intensity is paramount to making electrification successful operationally, not merely technically, achievable.

Although sustainable-building professionals put this into practice, the questions remains as to whether or not property owners will do so. Despite an awareness of non-fossil-fuel technologies, many developers compare these technologies with conventional systems using code minimum energy standards – rejecting the former as operationally too expensive. Therefore, the Town should assume that given the option to build all-electric, developers will not necessarily go beyond the code minimum energy standards necessary to make electrification sustainable and cost effective unless they are provided at a minimum with guidance and preferably with required realistic performance standards. Awareness of the technology is not the problem, but knowledge about the optimal path, especially when derived through the energy modeling process itself, apparently is.

Air source heat pumps (ASHP) have a typical coefficient of performance (CoP) of about 2.0, though their efficiency varies in very cold weather.⁵ Because below-ground temperatures are more stable throughout the year, ground source heat pumps deliver

¹ <https://www.unep.org/>

² https://www.worldgbc.org/sites/default/files/WorldGBC_Bringing_Embodied_Carbon_Upfront.pdf

³ Intergovernmental Panel on Climate Change: Special Report on Global Warming above 1.5°C (2018) <https://www.ipcc.ch/sr15/>

⁴ To be clear, because zero energy or zero emissions buildings do not necessarily preclude on-site combustion unless such a ban is specifically stated; they are not the same as zero carbon--see "Definitions."

⁵ <https://www.nrel.gov/docs/fy15osti/63913.pdf>

even more heat per kilowatt hour of electricity and have a CoP value of around 4.0. In contrast, the most sustainable EnergyStar gas furnace has an annual fuel utilization efficiency (AFUE) of 85% to 90%, which is less than the break-even value of 100% (equivalent CoP of 1.0). Despite their high efficiency, ASHPs, which are powered by electricity, are more expensive than combustion systems to operate, especially in the Northeast – unless the building has low energy use intensity (EUI). (GSHPs are competitive with combustion systems, operationally.) In Massachusetts, electricity costs three to five times as much as natural gas per unit of energy (Mass.gov). To achieve near-cost parity operationally with combustion system, electric buildings must be designed to exceed Stretch Code energy efficiency standards; namely, by meeting Passive House energy efficiency targets.

Successful implementation of a fossil-fuel-free (FFF) policy is critical in order to ensure that mechanisms are applied with consistent, predictable results and do not undermine the very goal they are set to achieve.

Crafting an effective implementation mechanism through zoning or any other approach needs to address head on the real, but not insurmountable, barriers to electrification. Similarly, financial incentives might be better directed to the process of achieving superior energy efficiency rather than to the electric systems themselves.

Addressing Real Barriers to FFF Construction

Although building electrification is the most promising path to displacing fossil fuels, several sustainable building experts we interviewed expressed outright alarm at the possibility of electric systems being used in inefficient buildings. According to Lauren Baumann, LEED AP, CPHC, Vice President of New Ecology, a Boston-based sustainable building non-profit focused on underserved populations, including the all-electric, 100% affordable To Life senior housing project on Harvard Street:

“One of my worst nightmares with the electrification movement is that these systems will be applied to inefficient buildings...we have to be deliberate about doing this right or we will encounter serious backlash [against significantly higher operational costs].”

Identifying the challenges to electrification is not an argument against heat pumps. On the contrary, proactively countering these challenges with optimal performance standards, industry best practices, and a conservative approach to operational costs ensures that the resulting buildings are cost-effective to construct and operate – and provide tested solutions to typically risk-averse developers and property owners. The misconceptions about electric buildings – namely, that they are too expensive to operate – will indeed have merit if electrification mechanisms do not provide the necessary benchmarks. The following challenges and best practices support the concept of bundling FFF policy with appropriate energy standards, renewable energy planning, and provisions for reducing embodied carbon emissions.

Coefficient of Performance

Although heat pumps are considerably more energy efficient than conventional heating systems, actual performance of air-source heat pumps in the field does not come close to the Coefficient of Performance (CoP) advertised by manufacturers. According to

Edward Connelly, President, New Ecology, no studies have shown continued performance at CoP 3.0, the rate commonly advertised for mini-splits, for example.

- A more realistic CoP range is 1.3 to 1.9 – an important consideration when modeling energy costs.
- Although reasons for the disparity are attributed to manufacturer lab conditions and configuration of controls, right-sizing the system for heating and cooling loads in the design modeling stage is key to reducing both initial and operating costs.
- Quality installation is also critical to avoid energy loss.

Cost of Electricity

Massachusetts has the fourth highest electricity prices in the United States (Source: [eia.gov October 2020](#)). Electricity also costs three to five times as much as natural gas per unit of energy in Massachusetts (Mass.gov). Using electric heating and cooling systems with code-minimum insulation and air barrier standards will result in significantly higher operational costs. According to Ms. Baumann, to achieve cost parity with gas-powered buildings, all-electric buildings must be designed to exceed Stretch Code energy efficiency standards; namely, by meeting Passive House energy efficiency targets.

The hallmark of Passive House is that it can achieve significantly higher energy efficiency compared with conventional buildings through principles that include superinsulation and air tight construction ([PHIUS](#), [Passive House Institute](#)).

Despite the more stringent building envelope standards, a study commissioned by the City of Boston Department of Neighborhood Development estimated that construction costs would be up to just 2.5% higher than code minimum construction, before rebates and incentives, based on Passive House standards and no fossil fuels for heating ([City of Boston DND Guidebook for Zero Emissions Buildings 2020](#)).

Ensuring Equity

Achieving energy-cost parity for low-income tenants is another reason to be deliberate about crafting electrification policy. Without low-energy performance targets, the shift from natural gas to electricity will disproportionately impact this vulnerable population. It is important to emphasize that this consideration should not be a deterrent to electrification. The affordable housing sector has led the way in exceeding code minimum energy requirements – namely the application of Passive House through tax credits – making buildings more energy efficient and reducing utility costs ([LISC.org](#), [Architect Magazine September 14, 2016](#)). Designing to exceed Stretch Code energy efficiency standards is applicable to both affordable and market rate housing, but it is especially critical to avoid disproportionately high energy costs for low-income tenants.

The majority of the real-estate investors we interviewed own the rental properties they develop and require the tenants to pay for electricity. All of them expressly stated that they were unlikely to construct electric buildings if that meant higher electric bills for tenants, an economic burden that would also hinder the marketability of their apartments. (Most of these developers were not exceeding code minimum efficiency standards to the degree that would achieve cost parity, however.) It is unlikely that

developers will consistently and uniformly volunteer to exceed code minimum standards to a degree that would achieve operational cost parity unless zoning mechanisms banning on-site combustion of fossil fuels are accompanied by standards for optimal energy efficiency.

Domestic Hot Water

Efforts to conserve domestic hot water (DHW), though important, are not likely to sufficiently reduce loads to make electric DWH systems cost-effective, according to several building technology experts we interviewed. However, because technology is evolving, systems can be designed to enable easier conversions to electric DHW in the future. Gas-powered domestic hot water systems are the exception in electric buildings but are increasingly being designed so that they can be replaced by heat pumps in 15 to 20 years.

Power Grid Capacity: Renewable Energy and Battery Storage

Common responses directed to the effort to advance FFF policy are that (a) the power grid relies heavily on fossil-fuel sources and therefore is still too dirty to justify promoting electrification and (b) the demand on the power grid will result in power outages and service interruption unless utilities construct more infrastructure.

The current (albeit decreasing) reliance of the power grid on fossil fuels is not legitimate given that the ISO-NE power grid is incrementally getting cleaner, whereas new conventional buildings constructed today exist for decades and therefore are not reducing emissions annually. Furthermore, retrofits are expensive and, should there be carbon tax imposed in the future, there is the financial risk of operating a conventional building that relies on fossil fuels.

The argument regarding power outages is indeed widely recognized as a pragmatic one, though certainly not a reason to delay building electrification. In addition to reducing emissions, incorporating rooftop photovoltaic panels in combination with energy storage is also a matter of strategic resiliency planning. Although this combination of technologies alone will not satisfy future energy demand, distributed PV like rooftop solar arrays have no transmission needs and are a component of an energy demand strategy.⁶

So, why have so few major impact projects permitted in the last five years in Brookline incorporated rooftop solar? Staff speculates that unless buildings are designed to exceed code minimum efficiency standards, developers are rejecting rooftop solar as not worth the investments. Again, developers are evaluating costs based on code minimum standards. There might be other reasons that have yet to be confirmed.

The importance of proactively addressing future energy needs is another reason to have standards for on-site renewable energy generation. Other than recommendations in the Climate Action Plan 2018, there are no implementation strategies in Brookline advancing on-site renewable energy. In a community in which the allowed multifamily building envelope is about four stories and 75% of its land area is zoned single-family – building

⁶ National Renewable Energy Laboratory: <https://www.nrel.gov/docs/fy10osti/45653.pdf>

typologies conducive to rooftop solar⁷ – the low installation track record deserves examination.

In short, zoning mechanisms crafted to advance FFF construction should not only include higher energy efficiency standards but also considerations for on-site generation of renewable energy. Those considerations might include design provisions for solar-ready buildings, reserving adequate space on the rooftop to support eventual installation.

Also see City of Somerville Zoning Ordinance adopted in 2019 for [Master Planned Development Overlay Districts](#)⁸, which mandates these three principles in combination: no on-site combustion, Passive House or Living Future energy standards, and on-site renewal energy or a green roof.

Addressing Perceived Risks and Misconceptions

As the Section 5 on “Costs and Incentives” briefly describes, studies have shown that new construction of electric single family and multifamily buildings can achieve cost parity in terms of first costs and operating costs – if deep energy efficiency is designed first.

Staff interviewed developers of both rental and for-sale properties (buy-and-hold investors and buy-and-sell investors, respectively). Because staff did not have time to survey homeowners about their awareness of and/or experience with heat pumps, this section will focus on property owners who are primarily multifamily investors.

The developers we interviewed are knowledgeable investors with large portfolios and extensive real estate development experience. All are Brookline- and Boston-based, some with deep family ties to Brookline. While all are aware of green building technologies, the degree to which they apply them on their own projects ranged considerably. For some, it is mission-oriented, for others it is the “fear factor” of a future carbon tax that would adversely affect their *pro forma* as well as make unplanned retrofits expensive. Some, though not all, work with green engineers. Others do not conduct energy modeling. It is clear that many reject air-source heat pumps and solar panels because they based their comparisons on code minimum not Passive House efficiency standards. One developer felt that only GSHPs are cost effective. Very few were aware of MassSave multifamily and commercial incentives for Passive House.

So, if renters and condo-buyers are paying the electric bills, then why would a developer care about operational costs? The developers we interviewed are not only sensitive to the potential financial burden, but they also all identified perception risk as having a negative impact on rents and sales prices. Even those who applied heat pumps acknowledged that there is a negative perception about electric buildings among both market-rate and low-income renters (high electric bills) and especially among luxury-property buyers (central HVAC is considered “upmarket”; minisplits are not “centralized” so they are miscast as “downmarket”).

⁷ Solar also improves the business case for low-rise multifamily: <https://www.pembina.org/reports/solar-pv-retrofit-case-study-2020.pdf>

⁸ <https://www.somervillezoning.com/wp-content/uploads/sites/2/2019/12/20191212-Adopted-SomervilleZoningOrdinance.pdf>

We do not have data on the degree to which rents and sales prices are discounted based on perceptions of electric HVAC infrastructure. However, given that the real estate market is highly competitive, it is reasonable to expect that misconceptions among the end-user are a risk to the investor because, as in any competitive market, it threatens revenue and therefore net operating income. And, in the pro forma, or financial statement, net operating income (NOI) directly correlates to value.

To advance FFF, perception risk should not be dismissed. Incentives can indeed draw investors in to take a closer look, but alone, they will not guarantee successful implementation. For this reason, no matter what zoning mechanism the Town implements, educating the public—property owners and renters—is paramount and should be an indispensable component of the Town’s FFF policy. (See Section 8 of this report for recommended strategies.)

The Risk of Delaying Retrofit Challenges

While new multifamily and single-family construction can achieve cost parity with conventional construction (in highly efficient buildings), retrofits present challenges unique to their sites and are not as straightforward.⁹ As the next section discusses, generous energy efficiency incentives exist for new commercial and multifamily construction, but there is a lack of comparable incentives for the deep energy efficiency upgrades required for retrofits. Moreover, most investments in energy efficient upgrades are not eligible for immediate tax write-offs under current tax law.¹⁰

Accordingly, MassSave should provide incentives that would address this imbalance, especially now that a net zero stretch code under the Climate Bill could survive negotiations and while MassSave is soliciting municipal input for its Three-Year Energy Efficiency Plan.

Implications of Overlooking Embodied Carbon Emissions

Overlooking retrofits has another byproduct—indirectly encouraging demolition by making new construction comparatively more cost effective, and that has implications for embodied carbon emissions.

Embodied carbon is the sum of all the greenhouse gas emissions (mostly carbon dioxide) resulting from the mining, harvesting, processing, manufacturing, transportation, and installation of building materials. When a building is demolished, energy is used to deconstruct it, and remove, process, and dispose of the waste. Building a new replacement requires more materials and energy, creating more embodied carbon. Moreover, some building materials are more carbon intensive than others, whereas certain materials can serve as carbon sinks (that is, they store carbon). It is worth

⁹ For an excellent report identifying these challenges, we highly recommend “[Going Electric: Retrofitting NYC’s Multifamily Buildings](https://www.urbangreencouncil.org/sites/default/files/urban_green_going_electric_4.22.2020.pdf),” including nine steps for advancing electrification in existing buildings.

https://www.urbangreencouncil.org/sites/default/files/urban_green_going_electric_4.22.2020.pdf

¹⁰ The bipartisan E-QUIP bill would amend this. <https://www.aceee.org/press-release/2020/12/analysis-bipartisan-bill-spur-building-upgrades-would-cut-energy-costs-and>

9.A.

repeating that we will not meet full decarbonization by 2050 without a strategy for reducing embodied carbon emissions.

The impacts of demolition and replacement of a structure relative to impacts of refurbishing an existing structure vary by the specific situation. A life-cycle assessment (LCA) is necessary to evaluate the embodied carbon emissions depending on the variables involved. In fact, the Planning Department's Preservation Planners recommend requiring an LCA on those projects proposing demolition. Section VIII of this report suggests a carrot-and-stick approach: a deconstruction policy and a life-cycle (embodied carbon) assessment to disincentivize demolition and to encourage low-CO₂-intensive or carbon-storing materials, and possible financial incentives to support Passive House upgrades/FFF conversions if the structure is preserved, along with primers on Passive House best practices for historic structures.

Summary: Green Building Standards in FFF Zoning Mechanisms

An FFF zoning mechanism should include a combination of green building standards to ensure the most successful outcome and predictable application:

- No on-site combustion (with reasonable exceptions)
- Passive House energy standards
- A renewable energy plan
- If applicable: Life-Cycle Assessment

V. Green Buildings: Cost Considerations and Available Incentives

BRIEF

Cost parity between fossil-fuel buildings and fossil-fuel-free buildings is achievable through Passive House standards. Incentives available through MassSave and incentives tax credits available at the federal level for select projects further defray the costs associated with Passive House certification, testing, and verification. The available incentives are not all encompassing, however, and the Town can best allocate resources to financial incentives that bridge the gaps in the existing web of state and federal opportunities.

CONTENTS

1. Cost Parity
2. MassSave Incentives, Local Possibilities, and Neighboring Communities
3. Federal Incentives

Cost Parity

The previous section discussed the well-established foundation for electrification: at the very least (1) deep energy efficiency targets especially Passive House levels first, (2) as much on-site renewable energy as possible, and (3) building systems powered by electricity. The importance of elevating the reduction of embodied carbon emissions to a key emissions strategy was also addressed.

A review of cost considerations and related possible incentives should therefore be extended to include more than just heat pump technology; for example, Passive House energy modeling, certification, verification; solar PV, and so on. Studies of electrification of single-family¹ and multifamily² in Boston show that cost parity (capital and operating costs) are achievable. For multifamily and commercial, incentives for the Passive House standards (namely energy modeling, certification, testing, and verification) defray the additional costs in this area.

MassSave Incentives, Local Possibilities, and Neighboring Communities

As this report has stated repeatedly, because Governor Baker returned a landmark Climate Bill to the legislature with amendments, negotiations are expected, especially around a possible net zero stretch code and revamped MassSave incentives. Rather than providing an exhaustive analysis of costs and available incentives, this section of the report provides some observations and recommendations (see *Table V-1*). Overall, because of the degree of movement at the State level, the most cost-effective allocation of municipal resources is to channel energy into assessing gaps in incentives for new construction, retrofits, including unique cases involving historic structures, and to advocate for constituents' needs in a consolidated manner.

If the Town were able to fund incentives tied to support fossil-fuel-free (FFF) buildings, one underserved area is Passive House/FFF retrofits in the preservation of historic

¹ <https://rmi.org/insight/the-new-economics-of-electrifying-buildings/>

² https://www.boston.gov/sites/default/files/file/2020/03/200306_DND%20book_FOR%20WEB.pdf

structures. If the Community Preservation Act (CPA) referendum passes, opportunities for incorporating sustainability standards into the distribution of funds should be identified and encouraged.

In addition, staff has observed activity in cities like Newton and Boston that help connect property owners to available resources and incentives. For example, Newton Energy Coach for homeowners and Boston's Building Energy Efficiency Retrofit Hub for owners of low- and mid-rise multifamily housing units bridge the connection to incentives and best practices recommended by MassSave and utility companies (rather than providing the incentives themselves.) Because the developers we spoke with were not necessarily exceeding the Stretch Code (or working with an energy modeler who identifies and factors in incentives), they were not aware of the generous incentives MassSave currently offers for Passive House *new* construction (multifamily and commercial). The incentives pay for the energy modeling and other steps in the Passive House process—essentially free technical expertise!—while still allowing the property owner to back out of the Passive House commitment.

Given the time constraints, we are not able to survey homeowners to discern what types of incentives would best appeal to them. We suspect that homeowners are more inclined to coordinate major upgrades, like weatherization improvements, with the eligibility requirements of MassSave incentives. For example, it is unlikely that they will bundle a \$20,000 HVAC conversion with a mudroom addition.

For multifamily and commercial real estate investors, mechanisms that improve the pro forma over the investment period (such as tax credits) are the most attractive. However, the developers we interviewed were especially interested in impacts on operating costs, even more than capital costs, because of the perception of the end user. Staff did not receive any compelling feedback about the appeal of a reduction in permitting fees.

Federal Incentives

We have been following climate-action activity including that related to tax credits at the federal level: Through the 2020 bill, the Energy Efficient Qualified Improvement Property Act (E-QUIP)³, U.S. Reps. Brad Schneider (D-IL) and Tom Rice (R-SC), would amend federal tax law to provide accelerated depreciation for key energy efficiency upgrades in commercial and multifamily residential buildings. According to the ACEEE, which reviewed the proposal:

Building owners are effectively disincentivized from making efficiency improvements because most such investments are not eligible for the immediate tax write-off available to other business investments under the 2017 tax law. Instead, they are subject to depreciation periods of 15 to 40 years—often far beyond the useful life of the new equipment—making the initial outlay a financial challenge.

The E-QUIP proposal would give building energy investments accelerated, uniform 10-year depreciation if they meet strict energy efficiency criteria. It would apply to heating and cooling equipment, lighting, controls for equipment and lighting (such as smart thermostats and occupancy

³ https://schneider.house.gov/sites/schneider.house.gov/files/FINAL%20DRAFT%20--%20SCHNEI_040_xml.pdf

9.A.

and daylight sensors), and building shell components (roofs, insulation, and windows) installed through 2025.⁴

We do note that the affordability housing sector has long been leading the way in advancing green building by tying Passive House standards to tax credits offered on qualified affordable housing projects. An expert we interviewed, Clifford Boehmer, principal of Davis Square Architects in Somerville which focuses almost exclusively on sustainable affordable housing projects, states that with tax credits tied to Passive and heat pumps, such technology is the standard on projects receiving public funds. Similar benefits for the commercial real estate sector would be welcomed.

Now that PACE is available in Massachusetts, the Planning Department, Treasurer's Office, and Assessor's Office are following it closely. See Section VIII of this report for more information.

⁴ <https://www.aceee.org/press-release/2020/12/analysis-bipartisan-bill-spur-building-upgrades-would-cut-energy-costs-and>

Table V-1 - Available Incentives

	Business Case for Electrification (Selected References)	Available MassSave Incentives for Passive House	Gaps
New Single Family	Cost parity achieved for construction costs. Operating costs are a bit higher in Northeast climate. See Rocky Mountain Institute	No	Yes
New Multifamily	Passive House construction costs 2-3% higher before incentives and rebates. Operating costs on par with Passive House standards. See City of Boston Dept of Neighborhood	Yes	Testing and verification excluded*
New Commercial	Built Environment Plus	Yes	Not certain
Retrofit SF	Many compelling, informal case studies. We would like to see case studies that involve MassSave incentives to identify formal gaps	Weatherization incentives are inadequate for electric (for example, air sealing is not included)	Yes
Retrofit MF	PEMBINA Reframed Lab and NYSERDA are running labs to better inform policymakers and lenders of Passive House retrofits.	None	Explore further to advocate
Historic	Passive House is achievable for historic, though not aware of business cases. Brookline Preservation Commission is an excellent place to start for technical.	None	Explore further to advocate
Affordable Housing	DHCD Sustainability Guidelines provide tax credit points for Passive House and ASHP. This does not include c.40B.	Yes	Not reviewed

* *The testing and verification (T&V) service cost tends to be very much related to the size of the project.*

For small projects that are less than 25 units, we generally cannot use a sampling approach for testing and verifying compliance with the program (per the RESNET sampling requirements) so these projects tend to have heavier fees per unit. For example, a 24 unit project we are working on comes in at ~\$1,400 per unit for T&V fees.

Once you go above the 25-unit threshold, we can utilize RESNET sampling protocols, so it reduces the number of units we need to test. We have a group of projects that are in the 35-60 unit range, and those tend to be in the \$800-\$1,000 per unit range for T&V fees.

The larger a project gets from there, the more benefit per unit it gets from the testing and verification sampling protocol. So for example, a 90-unit project had a T&V fee that was close to \$500 per unit.

The testing and verification fees outlined above includes all of the construction phase testing and verification required to get a passive house certification through PHIUS, which also includes a requirement to certify under the Energy Star and DOE Zero Energy Ready Homes programs.

Source: Lauren Baumann, Vice President, New Ecology

VI. Zoning Incentives

BRIEF

The scope of applicability as well as effectiveness of zoning incentives are limited by provisions of the Zoning By-law and state law that (1) offer more generous bonuses and (2) are easily available to applicants. If implemented indiscriminately and outside of deliberate land use studies, zoning incentives may have serious adverse impacts on the town and its neighborhoods.

CONTENTS

1. Five Zoning Incentive Mechanisms
2. Breadth of Applicability and Effectiveness
 - Zoning By-law Provisions*
 - State Law*
 - Existing Conditions*
 - Discussions with Developers and Technical Experts*
 - Other Obstacles to Applicability and Effectiveness*
3. Impacts and Other Considerations
 - Inconsistency in Impacts from a "Blanket Approach"*
 - Demolitions*
 - Local Historic Districts*
 - Electrification Without Energy Efficiency Standards*
4. Summary of Findings on Zoning Incentives

Zoning incentives involve the relaxation of one or several of the requirements of the Zoning By-law that impact development in exchange for a public benefit, which in the case of this report, is the electrification of the building(s). This section discusses how zoning-related mechanisms might be implemented, the obstacles or barriers to their effectiveness, and any impacts they may have on the integrity of the town's built environment.

Five Zoning Incentive Mechanisms

1. Dimensional Bonuses

Zoning incentives that provide relief from the *dimensional* requirements of the Zoning By-law encapsulate a wide array of options. The most obvious options are floor area ratio (FAR), setbacks, and height. These three dimensional requirements are the primary zoning constraints faced by property owners and developers in planning new construction and additions. Floor area ratio and setbacks (along with parking) are also the requirements of the By-law from which applicants most commonly need to seek zoning relief, indicating both their importance in limiting the scale of buildings and the difficulty involved in meeting those requirements.

Dimensional bonuses could be provided in several ways. Generally, a fossil-fuel-free (FFF) -related zoning incentive for FAR would provide additional square footage to an applicant provided that the resulting building is FFF. A height incentive would

9.A.

provide additional height and a setback incentive would reduce the required setback from the property line. However, their exact implementation could drastically affect their effectiveness to the property owner and impacts to the built environment and abutters.

Dimensional bonuses could be provided by right or by special permit. Offering the incentives by right could increase their rate of use (and therefore the proliferation of FFF buildings) while offering the incentives by special permit would likely reduce their rate of use in exchange for more input from the public, the Planning Board/Zoning Board of Appeals (ZBA), and municipal staff as well as additional expense in terms of time and resources. They could also be incorporated into the existing Zoning By-law in a variety of ways including through the Table of Dimensional Requirements and/or through existing “incentive sections” like Section 5.43 or Section 5.21. The incentives could be limited to certain zoning districts and/or specific uses, thereby reducing their rate of use in exchange for better predictability and consistency in their impacts on the town’s neighborhoods.

2. Floor Area Ratio Waivers

The concept of an FAR waiver as an incentive for FFF construction was born out of an attempt to develop an alternative to an FAR bonus where a property owner or developer can benefit from additional floor area without expanding the footprint or envelope of the building. Where a typical FAR bonus incentive provides additional square footage for an existing building or for new construction, an FAR waiver would provide an undefined increase in FAR provided that the exiting building’s footprint or envelope remains unchanged.

While FAR waivers could be implemented in a few ways, for the purposes of this report, they are assumed to be implemented in a manner consistent with the following general principles:

If the resulting building is FFF, a project proposing the following activities may access the associated benefits:

- *Interior conversions/retrofits:*

Benefit from:

- Waiver of FAR requirements
- Waiver of Special Permit and Design Review requirements

Required to maintain the existing building envelope (no exterior additions)

- *Exterior additions:*

Benefit from a waiver of FAR requirements

Required to:

- Go through the Special Permit and Design Review process, if otherwise subject to Section 5.22.

9.A.

- Maintain the existing footprint (any addition must be within the existing building's setbacks)

Much like dimensional bonuses, these benefits could be made available in the Zoning By-law in a variety of ways, including limiting the benefits to certain zoning districts and certain uses.

3. Parking Requirement Reduction

The concept of a parking requirement reduction incentive involves offering a reduction in the Zoning By-law's parking requirements provided that a project is constructed to be FFF. The Town's parking requirements for residential buildings are generally considered to be quite difficult to meet. Not only do many applicants claim that the requirements are unattainable, but the Zoning By-law does not offer a Special Permit pathway to reducing a project's parking requirements. (Parking relief requires a Variance, which typically present difficult legal challenges to an applicant.) The apparent desire for parking relief combined with the difficulty in legally obtaining that relief suggests that offering parking relief as an incentive for FFF construction could be an effective tool. A parking requirement reduction incentive could be implemented in various ways, including by right or by special permit and limited to certain zoning district or uses or applied widely throughout the town. However, the need and demand for parking should be addressed independent of and prior to using parking relief as an incentive.

4. Housing Density Bonus

A housing density incentive involves increasing the allowed number of units on a given property provided that the building(s) is constructed in an FFF manner. A property in a single-family district would be allowed an extra unit to become a two-family dwelling; a property in a two-family district would become a three-family; and so on.

5. Expedited Permitting

Expedited permitting as a zoning incentive differs somewhat from the other incentives in that it does not have any effect on the design, scale, or impacts of the resulting building. Expedited permitting provides a benefit to the applicant by reducing the amount of time spent going through the permitting process. This could be appealing. It could also be applied to both by right projects and projects requiring zoning relief in that expedited permitting can be made available for building permits and/or zoning relief permits. Expedited permitting could be implemented in a few ways, including a reduction in the statutory deadlines or a merging of jurisdictions under one board/committee (similar to a Comprehensive Permit under c. 40B). Expedited permitting incentives could also include reductions in permitting fees. Generally, expedited permitting places additional strain on staff, limits opportunities for the public or certain boards/committees to participate in a project's permitting process, and/or can be perceived as unfair to other applicants.

Breadth of Applicability and Effectiveness

To assess the breadth of projects to which an incentive would apply and to assess the incentive's expected utilization rate if implemented, it is critical to identify existing regulations that would interfere with or amplify an incentive's applicability and effectiveness. It is also important to examine existing conditions and permitting trends and to hear directly from the anticipated users of an incentive to understand if the incentives actually address existing obstacles and barriers and, if so, if they are sufficiently appealing to stimulate a shift towards FFF construction. Thus, understanding the scope of applicability and effectiveness of a zoning incentive can be informed by a review of the following:

1. *Local Zoning By-law Provisions*: The Town of Brookline's Zoning By-law already includes a variety of provisions that provide relief for dimensional requirements, parking requirements, etc. Further, some incentive mechanisms would conflict with the Zoning By-law. A complete understanding of these dynamics is required.
2. *State Law*: The Zoning Act (M.G.L., c. 40A) and c. 40B likewise contain provisions that can interfere with the success of zoning incentives.
3. *Existing Conditions*: The degree to which existing properties comply with the Town's current zoning requirements is an important element to understanding the effects of a zoning incentive. As an example, a zoning incentive that reduces the required setback area is hardly an incentive in a neighborhood where buildings predominantly feature no setbacks at all. Further, the extent of nonconformities needs to be identified.
4. *Discussions with Developers and Technical Experts*: While the team did not speak to or survey homeowners (for logistical and timing reasons), the team did engage several developers and architects with varying levels of expertise to understand whether zoning incentives would directly alleviate the obstacles and barriers faced by developers in constructing FFF buildings and whether zoning incentives and the extent of those zoning incentives would be sufficiently attractive to spur a change.

1. Zoning By-law Provisions

There are several sections of the Zoning By-law that impact the breadth of applicability and effectiveness of zoning incentives.

Provisions affecting primarily (but not exclusively) single- and two-family buildings:

9.A.

Section 5.43, Exceptions to Yard and Setback Regulations

Explanation

This section allows any applicant to request a waiver or reduction to any required setback in the By-law on the condition that the proposal include a “counterbalancing amenity”. Counterbalancing amenities are broadly defined by the section as “*such other dimensional requirements as shall assure the same standard of amenity to nearby properties as would have been provided by compliance with the regulations of the By-law, ... or by the provision or preservation of a condition or facility not otherwise required that will counterbalance*” the reduction in the required setback. In practice, the ZBA liberally grants reductions in the required setback if the applicant provides screening landscaping (or other minor counterbalancing amenity). Nonetheless, a Special Permit is required for projects to receive the waivers available under this section.

Affected Zoning Incentives

Dimensional Bonuses (specifically setbacks)

Impact

Any setback incentive will be ineffective unless it is available by right. Because Section 5.43 offers, by Special Permit, an unlimited reduction in setbacks in exchange for something as simple as landscaping, a more limited reduction in setbacks in exchange for FFF construction, offered also by Special Permit, is very unlikely to be useful to a developer or property owner.

Section 5.22, Exceptions to Maximum Floor Area Ratio (FAR) Regulations for Residential Units

Explanation

A long and relatively complicated section, Section 5.22 applies to single- and two-family dwellings located in S and SC districts. It offers a bonus to FAR for buildings that have remained relatively unchanged and in existence for at least 10 years. The magnitude of the FAR bonus depends on whether gross floor area is being added via an exterior addition or an interior conversion of space. An applicant proposing an exterior addition may request additional FAR up to 20% beyond the maximum requirement of Section 5.01 (Table of Dimensional Requirements) and an applicant proposing the conversion of interior space (basement or attic, for example) may request additional FAR up to 30% beyond the maximum requirement of Section 5.01. The FAR bonuses available under this section require a Special Permit from the ZBA and Design Review under Section 5.09.

Affected Zoning Incentives

Dimensional Bonuses (specifically FAR)

FAR Waivers

9.A.

Housing Density Bonus

Impact

Projects that qualify for bonus FAR under this section are unlikely to utilize an FAR incentive unless the incentive is available by right and/or is noticeably larger than the bonus offered under Section 5.22 (>30%). Buildings benefitting from the additional FAR available in this section are also prohibited from subsequently being divided into additional dwelling units; this prohibition prevents such buildings from benefitting from a housing density incentive.

Provisions affecting primarily (but not exclusively) multi-family (>2 units) buildings:

Section 5.05, Conversions

Explanation

In cases in which a conversion from a single-family dwelling to a two-family dwelling in an SC or T district or the creation of at least one additional dwelling unit in an F or M district is proposed, this section allows the ZBA to waive any required dimensional requirements provided any existing nonconformity is not increased. This section essentially allows the Zoning Board of Appeals to grant any necessary bonus to FAR, height, and setbacks in situations where additional dwelling units are being created, but a Special Permit is required to receive such bonuses.

Affected Zoning Incentives

Dimensional Bonuses

FAR Waivers

Impact

Projects proposing the addition of one or several dwelling units to an existing building are unlikely to utilize an FFF zoning incentive unless the bonus is available by right. However, most projects that qualify for Section 5.05 require a Special Permit regardless, so even if the FFF-related bonus were offered by right, an applicant may still find that opting for the FFF incentive to be the less desirable path, especially with an existing building where accessing the bonus would involve an expensive retrofit.

Section 5.21, Exceptions to Maximum Floor Area Ratio Regulations (Public Benefits Incentives)

Explanation

The FAR bonuses in this section are available to properties that satisfy four requirements, most notably: the property be located in a district with an FAR requirement of 1.5 or greater and the property contains no less than 20,000 square feet. The section therefore applies to very few properties; but in cases to

9.A.

which the section does apply, an applicant may seek additional FAR (up to 20%) if they provide “public benefits” in excess of any similar requirements in the By-law. Those public benefits may include “*affordable housing ...; landscaped and/or usable open space within public view ...; support, financial or otherwise, for community facilities and services ...; environmentally friendly sustainable building and site planning practices, significant provision of public parking and/or parking for car rental sharing services; subsidized MBTA passes for employees; provision of daycare space, either on or off-site; and preservation of historic structures.*” The benefits offered under this section require a Special Permit.

Affected Zoning Incentives

Dimensional Bonuses (specifically FAR)

FAR Waivers

Impact

Projects that qualify for bonus FAR under this section are unlikely to utilize an FAR incentive unless the incentive is available by right and/or is noticeably larger than the bonus offered under Section 5.21. However, in situations where the applicant determines that adopting FFF construction is more feasible (due to cost or other reasons) than providing one of the public benefits listed above, an FAR incentive may still be useful. Furthermore, it is reasonable to interpret this section as already providing an FAR bonus for projects that are FFF in that FFF is an “*environmentally friendly sustainable building and site planning practice*”. The bonus offered to such projects under this section is 20% in M-2.5 districts and 15% in other eligible districts.

Section 5.32, Exceptions to Maximum Height Regulations (Public Benefit Incentives):

Explanation

This section offers a bonus to the maximum height requirement for properties in the M-1.5, M-2.0, M-2.5, G-1.75(CC), G-2.0, GMR-2.0, and O-2.0(CH) if certain requirements are met. The applicant must provide substantial public benefits, which may include public parking, public open space, historically appropriate building materials, street improvements, maintenance of open spaces, and preservation of historic structures. The section also limits where on the property the height bonus may be used when the property is located adjacent to residential districts, indicating an acute sensitivity to the impacts of height bonuses on abutters. Bonus height available under this section requires a Special Permit and may range from 15 feet to 50 feet depending on the specific zoning district.

Affected Zoning Incentives

Dimensional Bonuses (specifically height)

9.A.

Impact

The height bonuses available under Section 5.32 are generous and fairly accessible to projects located in the designated zoning districts. Unless offered by right, a height incentive is unlikely to be used when a project could alternatively make use of the benefits in this section.

Section 4.08, Affordable Housing Requirements:

Explanation

This section requires that any project resulting in four or more units includes affordable units or a cash payment to the Town's housing trust fund. The requirements of this section apply to existing buildings that are renovated, resulting in additional units. Projects that trigger the requirements of this section are also required to go through the Special Permit process, although in most cases such projects require Special Permits for other reasons as well.

Affected Zoning Incentives

Housing Density Bonus

Impact

Allowing a developer or property owner to add an additional residential unit beyond the maximum allowed in the zoning district can be a substantial benefit, but the benefit is dampened significantly if it is accompanied by affordable housing requirements. In three-family districts (F districts), developers and property owners are unlikely to find a housing density incentive appealing because the benefit triggers at the four-unit threshold.

Section 6.01, 2a

Explanation

This section allows the ZBA to reduce by up to 50% the parking requirement in cases where a building is being converted (with or without an expansion of the building) for one or more additional dwelling units in the F, M, L, or G districts. This reduction in the parking requirement requires the granting of a Special Permit.

Affected Zoning Incentives

Parking Requirement Reductions

Impact

A parking incentive offers minimal benefits to projects that involve the conversion of an existing building to include additional dwelling units. Any such projects are unlikely to utilize such an incentive unless the incentive is available by right or stacks on top of the 50% reduction available in this section. Making the incentive available by right would only marginally improve its effectiveness because most projects that benefit from this section require a

9.A.

Special Permit under other sections of the By-law and therefore need to go through the Special Permit process anyway.

Provisions affecting primarily (but not exclusively) institutional and commercial buildings:

Section 5.08, Exceptions to Dimensional Requirements for Uses 9 and 10

Explanation

While M.G.L., c.40A, §3 (the “Dover Amendment”) makes this section of the Town’s Zoning By-law relatively moot, it technically allows the ZBA to alter or waive dimensional requirements for religious and educational institutions. A Special Permit is required for projects to receive the waivers available under this section.

Affected Zoning Incentives

Dimensional Bonuses

FAR Waivers

Parking Requirement Reductions

Impact

Almost every project that could receive the benefits of Section 5.08 is also protected under the “Dover Amendment” and can essentially ignore the requirements of the Town’s Zoning By-law. Zoning incentives that deal with dimensional requirements or parking requirements would have no impact on such projects.

Section 6.02, 1e

Explanation

Recently amended, this section exempts all storefront uses (uses 12-14, 16-18A, 20, 20A, 20C, 21, 29, 30, 32-36A, 36C, 37, and 44) located within the Transit Parking Overlay District (TPOD) from minimum parking requirements. Those uses include essentially all retail and service uses, with the notable exception of marijuana retailers and any automobile-related business. The TPOD covers roughly half of the town’s land area and most of its commercial areas.

Affected Zoning Incentives

Parking Requirement Reductions

Impact

A parking incentive would be completely ineffective at incentivizing FFF construction for buildings containing exclusively storefront uses as listed in this section. If a mixed-use building is proposed (storefront uses + residential), a parking incentive aimed at the residential portion may still prove effective at producing a completely FFF building.

Section 6.02, 1b***Explanation***

Although the recent elimination of parking requirements for storefront commercial uses has rendered this section largely moot, it still applies to other non-residential uses. Where it does apply, the ZBA may, by Special Permit, reduce the parking requirement by 10 spaces or 50% (whichever is greater) if a change or expansion of a non-residential use in a business district is proposed primarily within an existing building.

Affected Zoning Incentives

Parking Requirement Reductions

Impact

For projects that can make use of the parking reduction provided in this section, a parking incentive would be ineffective unless offered by right or stacked on top of the reduction available in this section. However, because this section applies only to existing buildings that are non-residential and not storefront commercial uses, and because retrofitting existing buildings to be FFF is costly, the effects of a parking incentive on cases subject to this section (and by extension, the effect of this section on effectiveness) are relatively minor.

2. State Law**MGL, c. 40A, Section 6: Single- and Two-Family Buildings**

M.G.L., c. 40A, §6 ("Section 6") allows single-family and two-family properties with a pre-existing nonconformity to further extend or intensify (with no specific limit) such nonconformities by Special Permit. For example, a building with an FAR of 1.5 which is subject to a 1.0 FAR may be increased in size to any FAR above 1.5 provided that the ZBA determines that the "*altered structure is not substantially more detrimental to the neighborhood than the existing structure*" – this determination is made through the Special Permit process. In effect, this statute grants an uncapped bonus to any dimensional requirement for all single-family and two-family properties where dimensional requirements already exceed the maximum allowed under the By-law.

Section 6 has a limited impact on setback incentives because the Town already provides setback relief by Special Permit through Section 5.43 (see above). Section 6 also has a limited impact on height incentives because single-family and two-family dwellings that already exceed the 35-foot height maximum are relatively rare in Brookline. Data indicating what portion of the town's single-family and two-family properties already exceed the height maximum for their district is not readily available.

9.A.

However, data on FAR is available and summarized in the section below on existing conditions. A third to one half of all single-family and two-family properties in the town are nonconforming with respect to FAR. Since nonconformance could conceivably have been established in a few ways, not all such properties benefit from the exception for pre-existing buildings under Section 6; but the vast majority of such properties do. The data nonetheless suggests that a significant portion of single-family and two-family properties would not make use of an FAR incentive if it were only available by Special Permit. For an FAR incentive to be useful to such properties, it would need to be available by right.

Affected Zoning Incentives: Dimensional Bonuses, FAR Waivers, Parking Requirement Reductions

Impact: Single-family and two-family properties that already exceed the maximum requirements for FAR, height, and setbacks, or do not comply with the minimum parking requirements in the Zoning By-law are unlikely to make use of an incentive related to those requirements that they already exceed unless the incentive is available by right.

MGL, c. 40B: Multi-family buildings

M.G.L., c. 40B requires that all municipalities in Massachusetts provide a minimum of 10% of their year-round housing stock as “affordable” housing (the threshold of affordable in this context depends on the Area Median Income (AMI), and other guidelines by the State). In communities where that 10% threshold is not yet met, developers may propose multi-family projects that do not conform to the local zoning requirements provided that the projects include a minimum quantity of affordable units. The Town has been fluctuating around the 10% threshold and, given the strict nature of the local zoning requirements when applied to multi-family buildings, developers have made extensive use of c. 40B to construct multi-family buildings. Between 2015 and 2019, roughly 800,000 square feet of housing has been permitted by the Town through the c. 40B mechanism while only 36,084 square feet have been permitted through the Town’s local zoning process. Until the Town is permanently above the 10% threshold or amends the zoning requirements to reduce the barriers to multi-family housing, zoning incentives for FFF buildings will not loosen the dimensional requirements sufficiently to steer developers away from utilizing c. 40B to deliver most of the Town’s multi-family construction.

Affected Zoning Incentives: All incentives

Impact: The construction of multi-family housing in Brookline occurs primarily through the c. 40B process and will continue to do so until the Town either permanently exceeds the 10% threshold or loosens zoning requirements related to multi-family housing. Any zoning incentives for FFF construction (unless of a very large magnitude) applied to the Town’s existing zoning for multi-family buildings will be of little appeal to developers who currently rely on c. 40B as their primary mechanism for the permitting of multi-family housing.

3. Existing Conditions

As indicated in the Methodology, existing conditions data related to FAR and permitting records from 2018 and 2019 were compiled for this report. The charts below provide relevant summaries of the gathered data and how they might inform an understanding of the breadth of applicability and effectiveness of zoning incentives for FFF buildings.

Figure VI-1 shows the conformance of *single-family and two-family properties* to the floor area ratio requirements of their respective zoning districts. The data shows the overall conformance for all single- and two-family properties and then provides the level of conformity for nine of the single and two-family residential zoning district (the district with the most data points).

Figure VI-1 - Single and Two-family Properties' Conformance with FAR Requirements

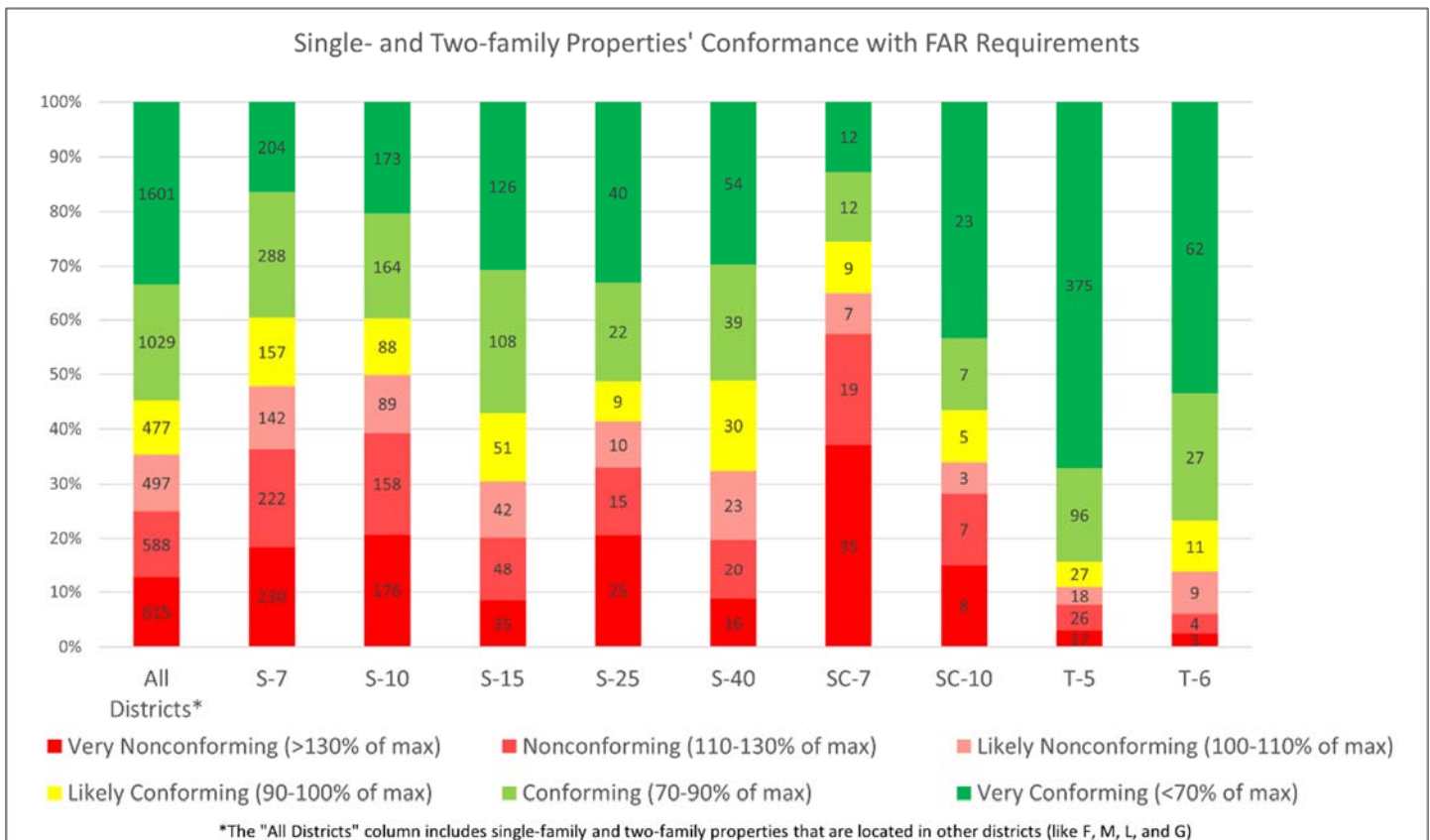
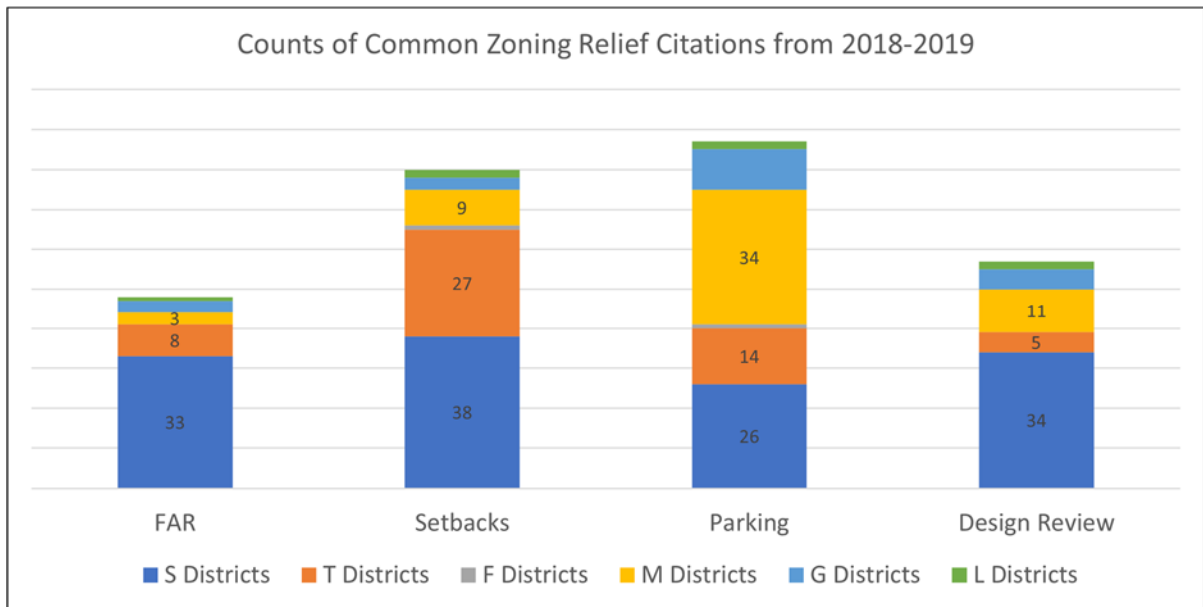


Figure VI-2 shows the four most common zoning relief citations appearing in zoning relief cases from 2018 and 2019. The chart provides the number of zoning relief applications from each class of zoning districts where FAR, setbacks, parking, or design review were cited.

Figure VI-2 - Counts of Common Zoning Relief Citations from 2018-2019*Floor area ratio:*

According to permitting records (*Figure VI-2*), FAR is one of the most common dimensional requirements from which applicants to the ZBA seek an exception, especially in single-family and two-family districts, where such properties have more options to exceed the maximum FAR by Special Permit. Overall, applications for FAR relief could be even more common if the threshold requirements for FAR relief for multi-family and commercial uses were lower or more widely available. Regardless, this data indicates either a strong demand to exceed the maximum FAR requirements of the Zoning By-law or a preponderance of pre-existing nonconforming FARs or a combination of both. Data on permitting records indicates that an FAR incentive could address an existing demand for such relief.

Two aspects of the data presented in *Figure VI-1* are relevant for FAR incentives applied to single- and two-family buildings: the number of nonconforming single-family and two-family properties (~35% over all districts) and the number of single-family and two-family properties that are well below the maximum FAR requirement (~30% over all districts). The first category are properties to which an FAR incentive would be useless (due to “c. 40A, Section 6”, see above). The size of this category tends to undermine the conclusion that an FAR incentive would be in demand and utilized. The data indicates that most of the zoning relief cases related to FAR are for modifications to a pre-existing nonconforming structure, rather than requests to create new FAR nonconformities. The second category in which the existing FAR is well below (>30%) the maximum FAR of the By-law, also represents properties for which an FAR would be limited in usefulness. In such cases, significant additional FAR is already available to the property owner or developer and a bonus to exceed the maximum requirement is unnecessary. Owners of these

9.A.

properties could increase the square footage of their homes by up to 30% without the need to exceed the maximum FAR requirement. Similarly, a developer could purchase the property, demolish the existing building, and build a new building 30% larger in size without needing any relief for FAR. Without a need for an FAR bonus, a zoning incentive would be ineffective in encouraging FFF construction.

Setbacks:

Permitting data from 2018-2019 indicates that zoning relief for setbacks is one of the most common requests to the ZBA. Zoning relief is required both in cases where a pre-existing nonconforming setback is extended or intensified and where a new nonconforming setback is created, indicating the following: 1) nonconforming setbacks are very common; and 2) requests to encroach on required setback areas are common. The first indicates the preponderance of properties where a setback incentive (if offered by Special Permit) would be entirely ineffective. The second indicates that new additions and new construction often desire a smaller setback and suggests the potency of setbacks as an incentive. Unfortunately, existing conditions data for setbacks is not currently available at a large scale.

Height:

Based on permitting data from 2018-2019, it is very rare for an applicant to the ZBA to request zoning relief to increase the maximum height allowance, possibly indicating that the height maximums of the By-law are easy to meet for applicants. Alternatively, because the By-law provides very few mechanisms to reduce height requirements by Special Permit (relief from height restrictions is typically only available with a Variance), applicants do not even attempt the request. Unfortunately, existing conditions data for height is not currently available at a large scale.

Parking:

Based on the statistics presented above, parking is the most common form of requested zoning relief, especially in M Districts. This suggests that a parking incentive would be fairly attractive for all projects but particularly for multi-family projects. It is especially difficult for multi-family projects to meet parking requirements of up to 2 spaces per unit and an incentive that reduces that requirement is likely to be of interest to developers. It should be noted that most projects that seek zoning relief from parking requirements need the relief because the existing parking on site is nonconforming or because the relief needed is related to the dimensions of parking areas; requests to reduce minimum parking requirements are not as common as the data suggests.

Conclusions: Available data indicates that applications for relief from setbacks, FAR, and parking are common, suggesting the potency of potential zoning incentives relating to those requirements. However, data also shows that there is a significant portion of single-family and two-family properties that are pre-existing nonconforming and for which an FAR or a setback zoning incentive would be

ineffective (unless provided by right). Data on height suggests that either demand for additional height is low or that demand exists but the By-law's restrictiveness on height discourages any attempt to seek relief. If the latter is the case, a zoning incentive offered by Special Permit could be sufficiently attractive. Data on parking relief indicates that a parking incentive could be effective for multi-family projects.

4. *Discussions with Developers and Technical Experts*

Developer's perspectives on the obstacles to FFF construction is key to understanding whether particular zoning incentives would be used. Developers can provide insight into what costs they associate with FFF buildings, whether dimensional bonuses can directly alleviate or mitigate those costs, and/or whether a particular incentive is attractive enough to compensate for the costs associated with making a building FFF. Similarly, technical experts (sustainability consultants, engineers, and architects) can confirm or refute the perceptions of cost held by developers and the public and provide their own input on whether zoning incentives would be effective. This section reviews some of the input provided by the developers, architects, and green engineers interviewed for this report. (See the portion on Methodology in Section II of this report for the backgrounds of interviewees.)

Based on discussions with developers, it seems clear that the primary obstacle from their perspective to constructing FFF buildings is operating expenses and, by extension, marketability. Electric heat is between three and five times more expensive per "unit of heat" than gas heat and the public is generally aware of this. Despite the fact that the cost differential can be reduced significantly (to almost zero) when a building is designed and constructed with Passive House or near-Passive House standards for insulation, the perception that electric heat is more expensive persists among the public and that perception represents a real loss in value for developers.

Floor area ratio: The ability to build a bigger building (an FAR incentive) does not offer any relief to that problem. Some developers suggested that a significantly large bonus (enough to allow the construction of an additional story, for example) could be sufficiently attractive to warrant a commitment to FFF. In any case, an FAR incentive would not directly address the marketability obstacle perceived by developers.

Setbacks: Setback reductions in exchange for FFF construction would not be particularly attractive to developers. Setback relief is too easily available (Section 5.43 of the Zoning By-law), and the provision of setbacks to provide for a yard, open space, or privacy is a desirable feature that improves the attractiveness and living quality of a property. Like an FAR incentive, setback relief does not directly address the marketability obstacle raised by developers.

Height: According to developers, a height bonus is an attractive incentive, although it does not alleviate the marketability problem of FFF buildings. If the bonus is sufficiently large to allow an additional story and it is offered in conjunction with a bonus to FAR, a height incentive could be effective in encouraging developers to adopt FFF construction. However, developers who noted that a height incentive would be enticing also raised concerns about how such a bonus might impact their negotiations with surrounding abutters. Increasing the height of a building has a very noticeable and tangible impact on surrounding properties and is likely to meet stiff resistance.

Parking: The concept of a parking incentive was briefly discussed with several of the developers interviewed for this report. While parking reductions can be desirable for larger projects, developers of smaller residential buildings (one to four units) indicated that in most cases the Town's parking requirements are consistent with what buyers are looking for (and therefore what developers seek to provide). For such projects, a parking incentive would prove generally ineffective by offering a reduction that is of no interest to developers. In the case of larger residential projects, developers indicated that while a parking reduction is appealing, it does not directly alleviate the marketability problem that they perceive as the biggest challenge associated with FFF construction.

Housing Density: A housing density bonus offered without accompanying bonuses to FAR and height was not appealing to developers as an incentive. Developers who commented on the concept indicated that adding an additional unit without allowing for additional square footage does not represent a sufficiently lucrative benefit for them to incorporate FFF construction. Selling or renting two smaller units with electric heat was viewed as only marginally better (or worse) than selling or renting one larger unit with a traditional heating source.

Expedited Permitting: Several developers expressed a strong interest in the concept of expedited permitting as an incentive. Developers of larger multi-family projects were less interested in the mechanism as developers of smaller (one to four units) projects. Developers underscored the length of the Town's permitting process and responded positively to suggestions that different stages in the process could be consolidated under the jurisdiction of a single board/commission. Some developers had no interest in expedited permitting.

5. Other Obstacles to Applicability or Effectiveness

FAR Waivers: The FAR waivers concept faces additional challenges to its effectiveness and breadth of applicability. Due to the nature of the incentive and its inherent requirements to maintain the existing building envelope or footprint, an FAR waiver would only apply in a small cohort of scenarios, which would require the following to be effective:

9.A.

- a) Given that the concept of an FAR waiver involves retention of an existing building, a retrofit of an existing HVAC system is involved.
- b) The FAR waiver offers unlimited additional floor area allowance but the additional floor area must be generated through the conversion of existing space (from space that does not count under the By-law's definition for gross floor area to space that does) or minor additions that do not expand the building footprint.
- c) The gross floor area added to the building through conversion or addition must increase the FAR for the building beyond the maximum allowed FAR for the zoning district. In the case of an addition, the additional gross floor area must increase the building's FAR to beyond 120% in order to compete with the existing bonus FAR available through Section 5.22.

Situations that involve all of the above are rare. While FAR waivers are an appealing mechanism in that they provide benefits to developers and property owners of existing buildings without compromising the integrity of the town's built environment, the very limited scope of applicability makes this mechanism ineffective at fostering renovations involving FFF HVAC systems.

Housing Density Bonus: In the context of the Town's Zoning By-law, allowing an additional housing unit only makes sense in districts that already limit the number of units per lot – single-family (S), two-family (T), three-family (F) districts, and the small multi-family districts where a minimum lot size per unit is required (M-0.5 and M-1.0). In such districts, dimensional requirements restrict the added benefit provided by allowing for an additional housing unit. Without accompanying incentives for FAR, setbacks, and/or height, a housing density bonus would have a limited appeal to developers and property owners.

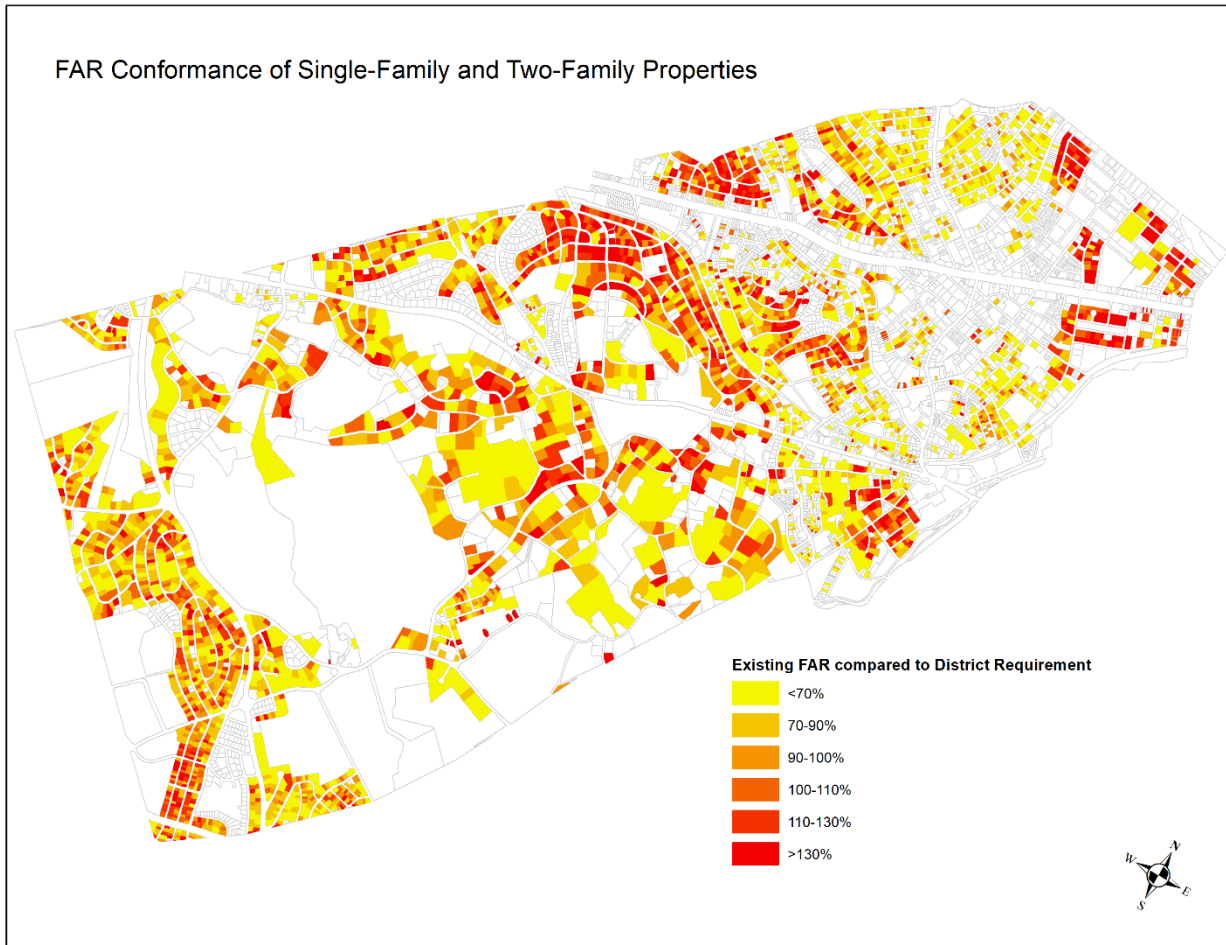
Expedited Permitting: This incentive mechanism (potentially including reduced permitting fees) faces implementation obstacles related to legality and practicality. Fees and deadlines for Building Permits and Special Permits/Variations are subject to strict timelines and fees that are regulated by the state (in the case of timelines for Special Permits/Variations) or limited by some other means. The Building Department strongly opposes reductions in permitting deadlines for FFF buildings, noting that the process of confirming that a building meets the FFF requirements would take more time, not less, than that needed for a fossil-fuel building. Building permit fees are also inflexible to the extent that they are set to cover operational costs. Building Department review of FFF buildings would also require additional training for inspectors and thereby might justify an *increase* in permitting fees rather than a decrease. In the case of permitting timelines for Special Permits/Variations, they are set in M.G.L., c. 40A and, while Assistant Town Counsel Jonathan Simpson suggests that they may be reduced by local By-law, any reductions in the timelines would also reduce the window of opportunity afforded the public to review and comment on zoning relief cases – a significant downside to the concept of expedited permitting generally.

Impacts and Other Considerations

As explored above, zoning incentives face challenges that limit their effectiveness and breadth of applicability. In some cases, those challenges can be overcome if the incentives are properly implemented. However, even if the incentives are implemented carefully and they are widely applicable and used frequently, they will likely lead to some undesirable unintended consequences.

1. Inconsistency in Impacts from a "Blanket" Approach

Impacts from the implementation of zoning incentives are likely to be very different depending on the neighborhood or zoning district. For example, in districts or neighborhoods with a high number of properties with non-conforming FARs, an incentive is unlikely to affect the built environment while in districts where FARs are close to the maximum in the Zoning By-law, an incentive could strongly encourage demolitions and reconstruction of FFF buildings with higher FARs. *Figure 3* below shows that FAR compliance, and therefore impacts of an FAR incentive, can vary widely by neighborhood.

Figure VI-3 - FAR Conformance of Single-Family and Two-Family Properties

Different building typologies are also affected in varying ways. A single-family property and a multi-family property in the same zoning district will consider an incentive that reduces parking requirements to be useless in the case of the former, and possibly lucrative in the case of the latter, leading to oversized FFF multi-family buildings scattered around single-family buildings.

Zoning incentives should not be established in a manner that ignores the special and even unique characteristics of each neighborhood or district. Furthermore, zoning incentives established by zoning district ignore the fact that uses not typically expected in a zoning district are still subject to the requirements of that district, whether those requirements are appropriate or not. A town-wide approach to zoning incentives risks very adverse effects in some neighborhoods and a complete lack of utilization in others. Appropriate zoning incentives should be established following deliberate land use studies focused on discreet neighborhoods and/or zoning districts that identify existing development patterns and then determine the most effective incentives.

2. Demolitions

According to discussions with New Ecology and developers with relevant experience, it is clear that retrofitting an existing building to be FFF is very costly. To access the benefits of zoning incentives for an FFF building, a retrofit project would need to involve both a near-complete reconstruction of the existing building and an expansion/addition to the building that benefits from the available incentives. Situations in which: a) a property owner is willing to undertake a full retrofit, b) a property owner is interested in expanding the existing structure, *and* c) the expansion/addition can make use of (or needs) the zoning incentives are rare. As such, zoning incentives are not generally practical for existing buildings.

Building a *new* FFF building (even a highly energy-efficient one) as opposed to a standard, gas-heated building involves a relatively negligible 2-3% cost increase. Because making a building FFF represents such a small cost increase in new buildings where it represents a significant investment for existing buildings, zoning incentives risk encouraging demolitions of existing buildings. For example, in a situation where a developer can get a height bonus of 10 feet by retrofitting an existing building at substantial cost or earns the same bonus by demolishing an existing building and then constructing a new building, many developers will prefer to opt for the latter.

Generally, encouraging FFF construction and other sustainable building practices involves some added risk to the existing building stock, but zoning incentives that offer additional bulk are especially risky. Where a financial incentive could be directly applied to defray the costs of a retrofit, a bonus to bulk is most practically applied to a new building. Therefore, offering any kind of dimensionally related zoning incentive for electrification carries an acute risk of encouraging the demolition of existing structures. It should be noted that in the years 2016-2019, the Town received 102 applications for complete demolitions and 63 of those buildings were deemed historically significant by the Preservation Commission. Any new By-law that has the potential to increase the rate of full demolitions may directly impact the historic assets of the town and runs counter to the Town's historic and neighborhood preservation goals.

3. Local Historic Districts

Demolition of buildings is essentially prohibited in the Town's Local Historic Districts. Additions and other expansions are permitted, subject to the approval of the Preservation Commission. Therefore, zoning incentives that offer additional bulk in exchange for FFF construction would provide little to no benefit to properties in LHDs. On the other hand, a financial incentive could help defray the cost of retrofitting an existing historic building.

4. Electrification without Energy-Efficiency Standards

Zoning incentives aimed at encouraging *electrification only* could have very unfortunate outcomes for sustainability efforts in the long run. Buildings constructed to be FFF without the accompanying energy-efficiency improvements will suffer from very high operating costs and ineffective heating systems. Residents of such buildings may have negative experiences with FFF buildings that lack the necessary energy efficiency improvements; if this pattern occurs at a sufficiently large scale, the public's perception of building electrification (and sustainability efforts more generally) risk being compromised. According to Lauren Baumann, LEED AP, CPHC, and Vice President of New Ecology:

"One of my worst nightmares with the electrification movement is that these systems will be applied to inefficient buildings...we have to be deliberate about doing this right or we will encounter serious backlash [against significantly higher operational costs]."

Enacting zoning incentives that provide benefits to developers merely for electrification is a mechanism ripe for abuse. Developers may take advantage of the dimensional bonuses and electrify the building but ignore the important energy-efficiency measures that ensure that the building operates at a reasonable cost and provides an enjoyable and livable environment for the residents. Any incentive for FFF construction and especially zoning incentives should not only require electrification but Passive House standards of energy efficiency.

Summary of Findings on Zoning Incentives

This report does not recommend the use of zoning incentives for the purpose of encouraging FFF development. As explored above, zoning incentives suffer from limited scope of applicability and effectiveness and risk undesirable consequences. Below is a summary of the challenges faced by each incentive mechanism that limit the mechanism's scope of applicability and utilization rate, as well as some of the notable potential negative impacts.

Dimensional Bonuses:

Benefits:

- Dimensional bonuses are desirable in Brookline, where tight zoning requirements force many projects to seek zoning relief.

Challenges to Applicability and Utilization:

- The Town's Zoning By-law includes several options to waive or reduce dimensional requirements by Special Permit. Dimensional bonus incentives must therefore be made available by right or be significant enough by Special Permit to be more attractive than already available bonuses.
- Brookline's tight zoning requirements mean that a significant portion of single- and two-family properties are nonconforming. M.G.L., c. 40A, Section 6 allows

9.A.

such properties to extend their nonconformities by Special Permit. Any dimensional bonus incentive made available only by Special Permit cannot compete with the benefits of Section 6.

- Multi-family buildings are primarily permitted through the c. 40B process. Dimensional bonuses cannot compete with the waivers available through c. 40B.

Impacts:

- Neighborhoods and zoning districts of Brookline vary widely in terms of the extent to which they conform to zoning requirements as well as their predominant development patterns. Dimensional bonuses must be applied at a more granular level to be effective while simultaneously limiting their effect on the scale and intensity of development. town-wide approaches are not appropriate.
- Because introducing electrification into an existing building is significantly more expensive than incorporating it into new construction, offering attractive dimensional bonuses may encourage demolitions.
- Any incentive for FFF should also require compliance with Passive-House energy efficiency standards. Without this dual requirement, developers may design and construct FFF buildings that are inefficient, very expensive to operate, and undermine sustainability objectives.

FAR Waivers:

Benefits:

- Because this incentive only applies in situations that involve the preservation of an existing building, it supports the preservation of neighborhood character and building integrity.

Challenges to Applicability and Utilization:

- FAR Waivers incentives face the same challenges as Dimensional Bonuses, but FAR Waivers also apply to a very niche portion of projects (conversions of interior space in existing buildings where creation of additional habitable space pushes the building's FAR above the By-law's maximum).

Impacts:

- FAR Waivers incentives do not carry any significant negative impacts, but like all incentives, they should be implemented to require Passive-House standards of energy-efficiency in addition to FFF requirements.

Parking Requirement Reduction:

Benefits:

- A reduction in the minimum parking requirements is perceived by developers to be a desirable benefit for multi-family buildings and may be sufficiently attractive to developers to encourage FFF construction.

9.A.

- Assuming that the parking needs of a residential building are met, reducing the minimum parking requirements has low negative impacts on neighborhood character.

Challenges to Applicability and Utilization:

- Reducing the minimum parking requirements offers no benefit to storefront commercial uses, where no minimum parking requirements exist.
- A parking reduction incentive offers little benefit to small residential buildings (one to four units) where developers have indicated that the parking requirements of the By-law are already in line with what residents desire. Zoning relief cases bear this out: most parking relief requests are to add additional parking spaces.

Impacts:

- Much like dimensional bonuses, a parking reduction incentive should also require Passive-House energy efficiency standards. Without this dual requirement, developers may (in many cases innocently) design and construct FFF buildings with the benefits of the incentives that are inefficient and very expensive to operate for residents.

Housing Density Bonus:

Benefits:

- A housing density bonus can offer a lucrative benefit in single-family and two-family zoning districts that doesn't have significant impacts on neighborhood character, provided that the incentive is implemented in a way that limits modifications to existing structures and doesn't involve other dimensional bonuses.

Challenges to Applicability and Utilization:

- A housing density bonus is not useful to multi-family projects or commercial projects.
- While a bonus housing unit might be appealing to the owner/developer of a three-family building, inclusionary housing requirements trigger at four units and those requirements counteract the benefits of the housing density bonus.

Impacts:

- Added housing density in certain neighborhood can have undesirable impacts on the intensity of use.
- If not carefully implemented, a housing density bonus could encourage demolitions of existing buildings.
- Much like dimensional bonuses, a housing density incentive should also require Passive-House energy efficiency standards. Without this dual requirement, developers may (in many cases innocently) design and construct FFF buildings

9.A.

with the benefits of the incentives that are inefficient and very expensive to operate.

Expedited Permitting:

Benefits:

- Expedited permitting offers a significant benefit to developers/homeowners that does not affect the bulk and use intensity of buildings.

Challenges to Applicability and Utilization:

- Building Permit fees and timelines have limited flexibility. Reducing them for FFF buildings is counterproductive given that reviewing plans for FFF buildings requires more time and more expertise from building inspectors.
- Zoning relief cases timelines are set by state statute and may be inflexible.

Impacts:

- Reductions to permitting timelines effectively eliminates opportunities for public input on potentially important projects.
- Much like dimensional bonuses, an expedited permitting incentive should also require Passive-House energy efficiency standards. Without this dual requirement, developers may (in many cases innocently) design and construct FFF buildings with the benefits of the incentives that are inefficient and very expensive to operate for residents.

VII. Conclusions and Overall Findings

Before proceeding to the alternative strategies recommended by the Planning Department and suggested next steps towards the implementation of sustainability policy, the section below briefly summarizes key findings from the preceding sections.

Strategies for Implementing Sustainability Policy

The successful implementation of sustainable buildings policy in the Town of Brookline relies on a holistic approach that addresses several aspects of green building technology. Electrification, deep energy efficiency, on-site renewable energy, and reductions in embodied carbon are all key pieces to a successful strategy that rely on each other.

Electrification and energy efficiency, in particular, are inextricable and both must be implemented concurrently for electrification to be not merely technically feasible, but operationally viable. Barriers to electrification like operating costs, marketability concerns, and ensuring equity all require solutions that involve standards for energy efficiency.

The contribution of embodied carbon to 11% of annual global emissions forces us to confront the issue of demolitions and seek resources to encourage alternatives. The nexus between historic preservation goals and those of sustainability is substantial and the Town should aggressively pursue a combined approach.

Zoning Incentives

Zoning incentives do not successfully satisfy this multi-faceted strategy and may in fact conflict with energy efficiency goals and efforts to limit embodied carbons. From a practical perspective, reasonable zoning incentives implemented in the context of the Town's Zoning By-law also lack a wide scope of applicability and would likely suffer from being ineffective due to low usage. In other words, zoning incentives do not apply to enough projects and are not appealing enough to spur a shift towards fossil-fuel-free buildings. If zoning incentives were drafted and implemented to overcome the obstacles to their applicability and effectiveness, their adverse impacts could be significant and unpredictable, including encouraging demolitions (thereby increasing embodied carbon emissions).

In addition to provisions of the Zoning By-law, certain state statutes also limit the success of zoning incentives. Two in particular, M.G.L., c. 40B and M.G.L., c. 40A, §6, provide relatively accessible means for multifamily projects and single- and two-family projects, respectively, to exceed or ignore local zoning requirements. The Town of Brookline is particularly susceptible to these state statutes because of its high occurrence of nonconformities in single-family and two-family buildings and its strict zoning requirements that limit the production of multifamily buildings through the local permitting process.

VIII. Alternative Strategies and Next Steps¹

BRIEF

The Planning Department recommends a multi-faceted approach to encouraging fossil-fuel-free buildings including: using the overlay zoning district mechanism to implement zoning incentives in discrete areas; establishing green building standards for design review; financial incentives especially aimed at gaps in the existing incentives available for green buildings; education and coaching; and deliberate steps to interweave sustainability goals with historic preservation goals.

CONTENTS

1. Zoning Mechanisms
 - Overlay Districts with Green Building Standards*
 - Green Building Standards for Design Review*
2. Financial Incentives
3. Education and Coaching
4. Preservation of Embodied Carbon, Preservation Goals, Alternatives to Demolition
5. Summary: Recommended Next Steps

Zoning Mechanisms

Overlay Districts with Green Building Standards

The Planning Department recommends leveraging several ongoing and planned land use studies and using the overlay district mechanism to deploy respective recommendations for urban design standards and zoning changes rather than outright zoning amendments. The incentives built into the overlay district would apply alongside additional requirements such as Passive House standards and fossil-fuel-free (FFF) construction. Because the underlying zoning would remain as an alternative option for property owners, these green building requirements would not be a mandate that could be interpreted as coming into conflict with building and plumbing codes, according to Assistant Town Counsel Jonathan Simpson. Multifamily and commercial districts have the highest potential for this application. However, there will be no proposals for Spring Town Meeting 2021. A phased approach is likely. Refer to Section III, Ongoing and Planned Land Use Studies and Synergy with Electrification Strategies, for a brief overview of these studies and their objectives.

Green Building Standards for Design Review

For those areas where overlay districts are not applicable, but design review would be triggered, the Community and Environmental Impact Standards under Section 5.09 of the Zoning Bylaw could be amended. Although not enforceable, the standards would at least be documented and communicated and therefore would serve as legitimate basis for negotiation with applicants of major impact projects.

A next step would be to identify appropriate energy performance benchmarks to couple with FFF construction standards, among other standards (renewable energy planning, electric-vehicle charging, low impact development, and so on). This documentation will

¹ See Tables VIII-1 and VIII-2 below for an overview of alternative implementation strategies and best practices to support effective implementation.

serve the Town well: Should the Town advocate at the State level for a net zero stretch code, it will be prepared with benchmarks that are relevant to its typical building stock. (For example, the EZ Code proposal currently before the BBRS focuses on commercial buildings but for whatever reason excludes multifamily and residential uses!)

Financial Incentives

For single- and two-family districts, density bonuses are not a viable path for FFF incentives. Residential districts with a high percentage of parcels of nonconformities are susceptible to a Section 6 finding (*Deadrick* ruling) and therefore would require upzoning to make them conforming; therefore, the overlay district mechanism would not be a competitive alternative. Since it has been assumed that homeowners are unlikely to bundle an HVAC conversion with a typical project going before the Board of Appeals, upfront cash may be the most effective mechanism.

Financial incentives to support efficiency upgrades if the property owner seeks an alternative to demolition would also preserve embodied carbon and architecturally significant cultural assets and would provide a tool to use during stays of demolition.

As Section V of this report discusses, MassSave offers incentives for Passive House certification for new commercial construction but none for existing buildings in need of upgrades to make electrification financially worth it, except for certain projects meeting affordable housing criteria. For single- and two-family residences, MassSave incentives also do not match the degree of weatherization required to make electrification sustainable and cost effective. These gaps are prime opportunities for financial incentives that would provide existing buildings with a successful path to electrification.

Admittedly, funding financial mechanisms at the local level might be challenging. The State is currently in the midst of developing the program design and savings goals for the 2022-2024 Three Year Energy Efficiency Plan. What the State chooses to incentivize over the next three years will play a critical role in the decarbonization of homes and businesses across Massachusetts, according to the Metropolitan Area Planning Council (MAPC)². Because Governor Baker and the Legislature will likely soon enter negotiations over key aspects of the Climate Bill (namely, the building stretch code with higher energy efficiency standards and possible provision for fossil fuel ban), the Town should advocate for incentives that would better facilitate retrofits of its typical building stock, especially historic structures, and multifamily/commercial and residential buildings.

Property Assessed Clean Energy (PACE) Program: MassDevelopment and the Massachusetts Department of Energy Resources announced that financing is now available through PACE Massachusetts to fund energy improvements on commercial and industrial buildings, multifamily properties with five or more units, and buildings owned by nonprofits. According to MassDevelopment, “to finance improvements, a property owner agrees to a betterment assessment and lien on their property, which repays the financing. This approach enables owners to undertake more comprehensive

² MAPC: Massachusetts Energy Efficiency Planning Process: <https://files.constantcontact.com/90617ed5001/ba038a1f-ce75-40be-b38f-499c07d77001.pdf>

9.A.

energy upgrades with longer payback periods of up to 20 years. At property sale, the assessment stays with the property and is transferred to subsequent property owners.”

The Finance Department and Assessors Board are willing to implement the PACE Program once the Select Board adopts the program. The Finance and Planning Departments recommend that the Select Board adopt the PACE Program following more education and acceptance from bankers that commonly hold mortgages in the Boston region. MassDevelopment notes that they are receiving calls from interested parties whose mortgage holders are not familiar with the program and not yet eager to sign off on a PACE betterment. MassDevelopment anticipates the first round of PACE closings to occur later this year with projects utilizing non-traditional capital financing structures. The Planning Department has offered to co-sponsor with MassDevelopment a Brookline-based conversation with banks and potentially interested parties.

Education and Coaching

As Section VI of this report points out, misconceptions about electrification among some homeowners and developers and potential buyers and renters is a real obstacle. Education is critical to the implementation of mandates and incentives. Developers are typically risk averse and need to see evidence that new technologies will not undermine their investments. End users need to be assured that electric buildings can be comfortable, cost-effective, and easy to maintain. The City of Newton created the [Newton Energy Coach](#) program, which connects Newton residents with volunteer energy experts who can answer their questions online or on the phone. The City has also created a full-time energy coach staff position. The City of Boston, in partnership with Eversource, created the Building Energy Retrofit Resources Hub, targeting low- and mid-rise buildings.

Preservation of Embodied Carbon, Preservation Goals, Alternatives to Demolition

The Town should identify reduction of embodied carbon emissions a key climate action strategy and in turn acknowledge that historic preservation and adaptive reuse are necessary pathways toward achieving zero emissions by 2050. Therefore, successful FFF implementation strategies will include ways to encourage alternatives to demolition; for example:

- Amending the Demolition Delay Bylaw to require an embodied carbon (life cycle) impact assessment
- Amending the Demolition Delay Bylaw with a deconstruction policy
- Providing financial incentives for Passive House/electrification as a resource during demolition stays (supplement gaps in MassSave incentives)
- Identifying incentives to facilitate Passive House/electrification standards for historic buildings with unique requirements

Implementation

Municipal resources and coordination amongst municipal departments are critical to taking the next steps in order to meet the Town’s climate action objectives. The newly

9.A.

created Sustainability Planning Division, evidence of the Town's commitment to promoting sustainability and addressing climate change, will take the lead in prioritizing and then implementing actions. It is expected that, over time, additional resources will be allocated to the Division.

A summary of recommended strategies follows in the two tables below.

Table VIII-1 - Strategies for New Construction and Major Renovations

NEW CONSTRUCTION AND MAJOR RENOVATIONS		
	Multifamily, Commercial Districts	Single-, Two-Family Districts
ZONING MECHANISMS	Overlay District with standards: <ul style="list-style-type: none"> Passive House No on-site combustion of fossil fuels (with exceptions) Renewable energy plan Embodied carbon (life cycle) impact assessment Deconstruction policy (if applicable) To be based on land use studies. Phased approach likely	None identified so far. Not clear if homeowners would even bundle an HVAC conversion with a project going before Board of Appeals. To avoid disincentivizing adaptive reuse (esp. historic): <ul style="list-style-type: none"> Embodied carbon (life cycle) impact assessment Amend Demolition Delay By-Law with deconstruction policy Could be layered with financial incentives for Passive House
	Update Sec. 5.09 Design Review with Green Building Standards <ul style="list-style-type: none"> Though not enforceable, and much less impactful than mandates, there is value in documenting and communicating standards. 	
	Update zoning by-law methodology for calculating gross floor area from/to exterior walls to exclude thicker walls used in Passive House construction.	
FINANCIAL INCENTIVES	Identify gaps in MassSave incentives; for e.g., Passive House testing and verification stages <ul style="list-style-type: none"> Supplement at the local level Advocate for at State level 	Identify gaps in MassSave incentives especially for efficiency beyond code minimum <ul style="list-style-type: none"> Supplement at the local level Advocate for at State level
	Identify resources to deter demolition during stay period (further study required)	Identify resources to deter demolition during stay period (e.g., Passive House incentives targeted for historic homes) Further study required

Table VIII-2 - Proactive Steps

PROACTIVE STEPS THAT ALSO INCLUDE EXISTING BUILDINGS		
	Multifamily, Commercial Districts	Single-, Two-Family Districts
Zero Emissions Planning for Existing Buildings	Identify issues pertaining to retrofits, especially challenges for those buildings occupied by tenants, in need of weatherization upgrades. Provide relevant input to State on how Stretch Code and MassSave incentives could be enhanced.	
Embodied Carbon Preservation	Zero emissions by 2050 not possible without embodied carbon strategy. Electrification mechanism should not inadvertently encourage demolition. <ul style="list-style-type: none">▪ Embodied carbon (life cycle) impact assessment▪ Amend Demolition Delay By-Law with deconstruction policy▪ Could be layered with financial incentives for electrification as a resource during demolition stays▪ Identify incentives to facilitate Passive House standards for historic buildings	
Education (Especially to address misconceptions about electrification)	Property owners and managers: Host roundtables; ask prominent “green building” property owners to serve as peer influencers or share case studies. Show how green building principles improve financial return.	Homeowners and renters: Communication campaign, online resources
Coaching See City of Newton:Newton Energy Coach See City of Boston: Building Energy Retrofit Resource Hub	Identify largest property owners for proactive outreach Survey property owners to (a) Identify timeline for HVAC replacement (b) track conversions Partner with Eversource Energy Experts an option (See City of Boston)	Create specialized program for historic homes Establish clinics, hotline, point-person on staff or volunteer group
Professional Development and Staffing	Support Building Department with resources for skilled staff or training (if necessary), additional inspection for Passive House.	
BEYOND ZONING		
Community Preservation Act	Awaiting town-wide vote. Consider incorporating green building standards into criteria for allocating funds, when appropriate.	
PACE	Defer participation until more outreach is conducted with banks that typically hold mortgages in Brookline. Town has offered to sponsor an educational forum with MassDevelopment.	
Lenders	As an alternative to PACE which is a lien, work with local banks to provide green loans for pre-design (energy modeling) phase and weatherization upgrades.	
Advocacy at State Level	Provide consolidated feedback at Select Board level to DOER/BBRS on any new stretch codes proposals. Advocate for creating incentives to encourage property owners to make weatherization upgrades approaching Passive House levels or pre-design energy modeling.	Provide consolidated feedback at Select Board level to DOER/BBRS on any new stretch codes proposals. Advocate for creating incentives to encourage property owners to make weatherization upgrades approaching Passive House levels or pre-design energy modeling.

Summary: Recommended Next Steps**1. Prepare Green Building Guidelines**

Channel efforts into a consolidated set of standards that can be used in different ways:

- a. To attach to an overlay district mechanism, new (or existing if re-negotiation expected)
- b. To amend Community and Environmental Impact Standards under Sec. 5.09 Design Review
- c. To advocate at the State Level for a net zero stretch code that is applicable to the Brookline building stock

Core Standards:

- a. No on-site combustion (with reasonable exceptions)
- b. Passive House standards
- c. Renewable energy plan
- d. Electric Vehicle charging

Additional Standards for Consideration (as applicable):

- a. Life Cycle Assessment (Embodied Carbon)
- b. Deconstruction Policy
- c. Low Impact Development Standards
- d. Open Space / Tree Canopy Conservation
- e. Passive Design / Site Optimization Standards

2. Identify Gaps in MassSave (and other financial) Incentives to Support Electrification

- a. Retrofitting existing single-, two-family to Passive House and heat pumps
- b. Retrofitting existing multifamily to Passive House and heat pumps
- c. Retrofitting existing historic structures to Passive House and heat pumps
- d. Advocate at the State Level

3. Plan Education

- a. Scope requisite resources
- b. Campaign for homeowners and renters
- c. Peer influencers for developers (and case studies)
- d. One-stop resource hub to connect available incentives
- e. Passive House guide (especially for historic structures)
- f. Skill sets needed on staff, especially inspectors and coaches

4. Draft Embodied Carbon Policy**5. Plan Retrofit Strategies**